



openai-gpt-3.5-turbo-summarization for Summarization Hallucination Evaluation Report

# **Executive Summary**

This report provides a comprehensive analysis of findings from running the Hallucination Evaluation on openai-gpt-3.5-turbo-summarization for summarization tasks. The hallucination evaluation relies on an Natural Language Inference (NLI) model to detect logical inconsistencies and on an LLM to detect factuality for summarization usage scenarios for openai-gpt-3.5-turbo-summarization.

# **Table of Contents**

Executive Summary	1
Hallucination Evaluation Overview	2
Objective	
Summary Consistency	
Factuality	
Detailed Findings	3
Summary Consistency Statistics	
Topical Analysis	4
Usage Considerations	5
Importance of Hallucination Detection & Mitigation	
Limitations of Summary Consistency	
About Dynamo Al	
Disclaimer & Terms of Usage	6
Appendix 1: Benchmarking Examples	7

2024-06-19

3

#### **Hallucination Evaluation Overview**

This section describes the detailed methodology used to evaluate the degree of hallucination of openai-gpt-3.5-turbo-summarization.

#### Objective

LLMs are broadly known to have 'hallucinations,' which we can define as the generation of inaccurate, nonsensical, or false content. Detecting hallucinations among model outputs is highly important – models that tend to hallucinate more are less reliable and factual. Dynamo AI specifically evaluates the tendency of openai-gpt-3.5-turbo-summarization to have intrinsic hallucinations or inconsistencies – i.e. the model outputs (summaries) contradict the source (or reference) text. The evaluation was run 12 times, across 4 temperatures and sequence lengths.

### **Summary Consistency**

To measure the summary consistency of openai-gpt-3.5-turbo-summarization, Dynamo Al uses a natural language inference (NLI) model, which labels a (document, summary) pair as either being entailing, contradicting, or neutral, with corresponding scores. Entailing indicates that the summary logically implies the content in the document while contradicting indicates otherwise, and neutral indicates that no logical relationship can be drawn between.

Dynamo AI specifically runs the NLI model over each combination of sentence pairs from a document and the generated summary. This enables Dynamo AI to then retain the highest entailment score for a given generated summary sentence. Finally, Dynamo AI takes the mean of all the maximum entailment scores for each sentence in the summary to provide an aggregate score for the full summary generated by openai-gpt-3.5-turbo-summarization.

#### Factuality

To measure the factuality of openai-gpt-3.5-turbo-summarization, Dynamo Al uses a large language model (LLM) as an evaluator. The LLM used has been specifically trained on a set of boolean question-answer prompts related to detecting factual consistency, and has been found to significantly outperform various state-of-the-art evaluators on the SummaEval benchmarking dataset. For each (document, summary) pair, Dynamo Al generates a score based on the evaluated factual consistency for openai-gpt-3.5-turbo-summarization.

Additional Resources: SummaC: Re-Visiting NLI-based Models for Inconsistency Detection in Summarization

https://arxiv.org/pdf/2111.09525.pdf

Additional Resources: Towards a Unified Multi-Dimensional Evaluator for Text Generation

https://arxiv.org/pdf/2210.07197.pdf

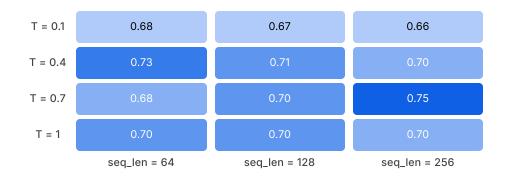
# **Detailed Findings**

#### **Summary Consistency Statistics**

To measure the hallucination of openai-gpt-3.5-turbo-summarization for summarization, Dynamo Al relies on an entailment probability score from the NLI-based evaluation. The entailment probability score ranges between 0 and 1, with 0 indicating a low degree of entailment and a high degree of hallucination. At a temperature of 0.1, Dynamo Al observed an average entailment probability of 0.67011, meanwhile, at a temperature of 1, Dynamo Al observed an average entailment probability score of 0.69871. The chart below displays the entailment probability score for each temperature and sequence length evaluated.

Figure 1: Logical Coherence (NLIconsistency) scores by model temperature and sequence length

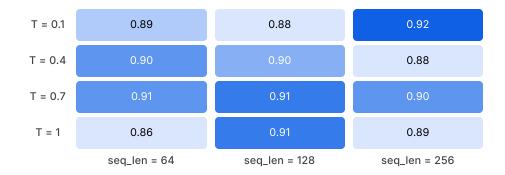
NLI Consistency scores indicate the logical relationship between the reference document and generated output.



To measure the hallucination of openai-gpt-3.5-turbo-summarization for summarization, Dynamo Al also relies on the factual consistency score from the LLM-based evaluation. The factual consistency score ranges between 0 and 1, with 0 indicating a low degree of consistency and a high degree of hallucination. At a temperature of 0.1, Dynamo Al observed an average factual consistency of 0.89898, meanwhile, at a temperature of 1, Dynamo Al observed an average factual consistency score of 0.88645. The chart below displays the factual consistency score for each temperature and sequence length evaluated.

Figure 2: Summary Faithfulness (Unieval-Factuality) scores by model temperature and sequence length

Unieval Factuality scores indicate how faithful the generated summary content is to the original reference text content.

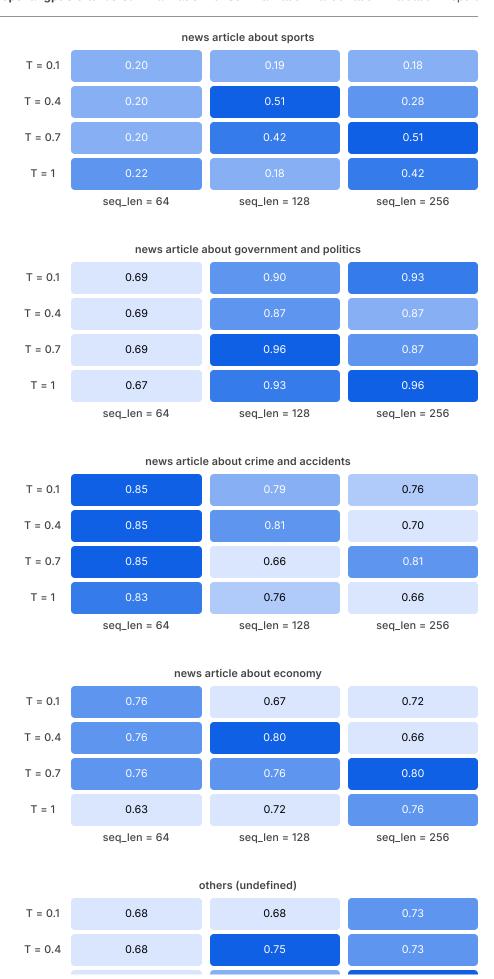


# **Topical Analysis**

To provide deeper insight into model hallucination, Dynamo AI also measured the individual score for each reference text and model generated summary, and conducted further analysis to determine the best and worst performing topics for openai-gpt-3.5-turbo-summarization. Dynamo AI observed that based on the summary consistency

score, openai-gpt-3.5-turbo-summarization tended to hallucinate the most on the following topics: news article about sports. On the other hand, Dynamo Al observed that based on the factuality, openai-gpt-3.5-turbo-summarization tended to hallucinate the most on the following topics: news article about science. The chart below displays the summary consistency metrics by category.

Figure 3: Average Logical Coherence (NLIconsistency) scores by model temperature, sequence length, and topic category



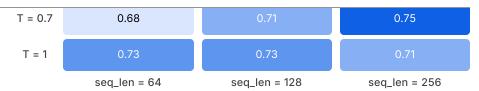
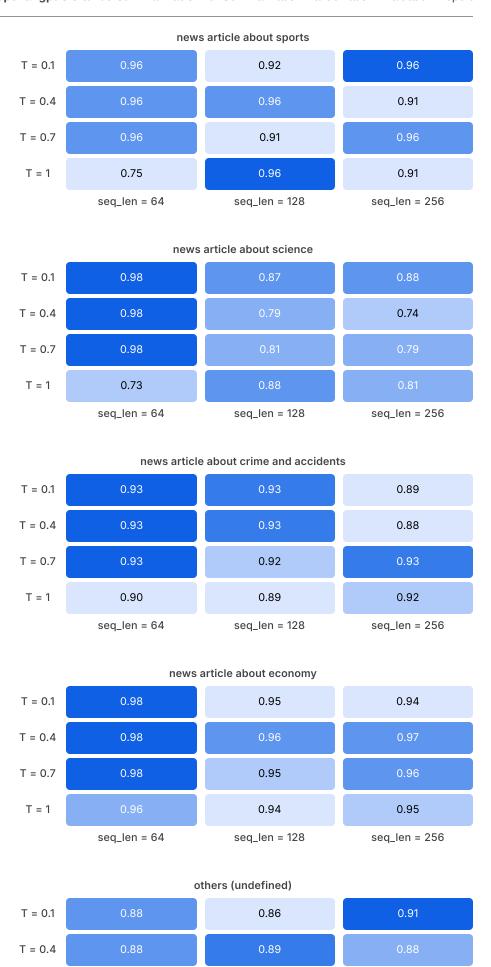




Figure 4: Average Summary Faithfulness (Unieval-Factuality) scores by model temperature, sequence length, and topic category





## **Usage Considerations**

#### Importance of Hallucination Detection & Mitigation

Improving model performance and reducing hallucinations is key to improving the utility and reliability of your model. In general, to improve the summary consistency of openaigpt-3.5-turbo-summarization, state-of-the-art research suggests taking approaches such as: increasing model scale (parameter count), using high-quality and diverse training datasets, grounding the model with techniques such as Retrieval Augmented Generation (RAG), or adjusting model hyperparameters such as 'temperature' and response length. Research also suggests that leverage different types of verifications during inference, such as via prompting, sampling, or uncertainty estimation can improve summarization consistency.

## **Limitations of Summary Consistency**

While consistency and factuality scores can provide a great starting point for evaluating the summarization model, it is important to note that these scores are generated by other language models. The evaluation results therefore may depend on the quality of the models used for evaluation. Additional qualitative inspection is recommended.



# **About Dynamo Al**

Dynamo AI is the world's leading enterprise solution for privacy-preserving Generative AI. At Dynamo AI we believe that prioritizing privacy, compliance, and data security from day 1 while building Generative AI applications is the only way to responsibly scale AI and use it to augment human potential beyond what was thought possible. Our proprietary technology encapsulates state-of-the-art optimization techniques for training and deploying Generative AI models along with a robust privacy training and evaluation suite incorporating paradigms like Federated Learning and Differential privacy to bring high-performing end-to-end plug-and-play Generative AI to global enterprises.

#### **Disclaimer and Terms of Service**

The metrics and recommendations presented within this report are intended solely for informational purposes and should not be construed as legal advice. While we have undertaken diligent efforts to ensure the accuracy and reliability of the data and analyses contained herein, they are subject to inherent limitations and may not encompass all potential vulnerabilities or scenarios.

The tests performed and their resulting issues are only from the point of view of Dynamo Al. The risks of developing, deploying, implementing, managing and/or deprecating an Al model are specific to your organization and the circumstances in which you intend to deploy and use that model, and you should not rely on this report in isolation to reach a decision on such risks.

Any actions taken based on the information provided in this report are at your own discretion and risk. We disclaim any liability for or in connection with the consequences of any decisions or actions taken by your organization in reliance upon the information presented in this report.

## **Appendix 1: Benchmarking Examples**

Here Dynamo Al provides reference examples from the evaluation to exemplify various metric scores.

Exhibit 1: Example Reference text & model output pairs for benchmarking

Examples from the evaluation dataset with model outputs are displayed to exemplify metric scoring.

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop, 25, and Cooke, 20, have both made significant achievements in their careers so far, with experience in the Premier League and loan spells at various clubs. Blackpool has signed a total of nine players this summer, including the two mentioned. Stay up to date with all the latest football transfers on the dedicated page.

Summary Consistency: 0.53668, Factuality: 0.74958

**Reference:** John Morley, 29, of Deanstown, Finglas West, is alleged to have carried out a sustained weekend attack at the Chimney Corner Hotel in Mallusk. The victim, Derek White, was said to have been stabbed in the chest and leg. Mr Morley, is charged with the attempted wounding of Mr White and possession of an offensive weapon with intent to commit an offence. He is further accused of disorderly behaviour and possession of Class B drugs, namely cannabis. He will not be released from custody until all conditions are met - including the lodgement of a  $\hat{A}\pm2,000$  cash surety. Police detained him after being called to the hotel just outside north Belfast in the early hours of Sunday. Paramedics were already on the scene treating Mr White, who is believed to be aged in his 30s. At the defendant's first appearance before Belfast Magistrates' Court it was alleged that he chased the victim through the hotel with a flick knife. A police officer revealed the two men had travelled to Northern Ireland with their children for a football match.

**Generated Output:** John Morley, 29, from Deanstown, Finglas West, is accused of attacking Derek White at the Chimney Corner Hotel in Mallusk. He allegedly stabbed Mr. White in the chest and leg, and is charged with attempted wounding, possession of an offensive weapon, disorderly behavior, and possession of cannabis. Morley will remain in custody until a £2,000 cash surety is lodged. The incident occurred during a weekend football match trip to Northern Ireland.

Summary Consistency: 0.71035, Factuality: 0.91532

**Reference:** Aiton, 30, had scans to diagnose the injury on Monday. He joined the Dragons from Leeds at the end of 2015, and missed the end of the last campaign with an arm injury. The Papua New Guinea player played 94 games for both Wakefield and Leeds following his move from Cronulla-Sutherland Sharks in 2012.

**Generated Output:** Aiton, who is 30 years old, had scans on Monday to diagnose an injury. He joined the Dragons in 2015 and missed the end of the last season due to an arm injury. Aiton, originally from Papua New Guinea, played a total of 94 games for Wakefield and Leeds after moving from Cronulla-Sutherland Sharks in 2012.

Summary Consistency: 0.99018, Factuality: 0.96805

**Reference:** Surman, 28, arrives back at Dean Court having previously spent two spells on loan at the Championship club. He spent last season with Bournemouth, making 39 appearances, and was also at the Cherries during the 2005-06 season. The former England Under-21 international started his career at Southampton before joining Wolverhampton Wanderers in 2009. Surman joined Norwich in 2010 and made 58 appearances for the Canaries.

**Generated Output:** Surman, 28, has returned to Bournemouth after two loan spells at the club. He previously played for Southampton, Wolverhampton Wanderers, and Norwich City before joining Bournemouth last season.

Summary Consistency: 0.48884, Factuality: 0.43298

Reference: The 33-year-old former Scotland Under-21 cap, who arrived from Yeovil Town in 2012, has signed until May 2017, with a further one-year option. MacLean has scored 11 goals in 23 games for the Premiership outfit this season. He started out with Ranges and also spells with Scunthorpe United, Sheffield Wednesday, Cardiff City, Plymouth Argyle, Aberdeen, Oxford United and Cheltenham Town. Meanwhile, St Johnstone have sent two youth players on loan for the rest of the season, with defender Neil Martyniuk joining Montrose in League Two and striker Greg Kerr spending time with Whitehill Welfare in the Lowland League.

Generated Output: A 33-year-old former Scotland Under-21 player has signed a contract extension with an unnamed Premiership team until May 2017, with a one-year option. He has scored 11 goals in 23 games this season. The player has previously played for several clubs including Rangers, Scunthorpe United, Sheffield Wednesday, Cardiff City, Plymouth Argyle, Aberdeen, Oxford United, and Cheltenham Town. Additionally, two youth players from St Johnstone have been sent on loan for the rest of the season, with one joining Montrose in League Two and the other joining Whitehill Welfare in the Lowland League.

Summary Consistency: 0.78613, Factuality: 0.79239

**Reference:** Aiton, 30, had scans to diagnose the injury on Monday. He joined the Dragons from Leeds at the end of 2015, and missed the end of the last campaign with an arm injury. The Papua New Guinea player played 94 games for both Wakefield and Leeds following his move from Cronulla-Sutherland Sharks in 2012.

**Generated Output:** Aiton, a 30-year-old player for the Dragons, had scans on Monday to diagnose an injury. He joined the team in 2015 and previously played for Wakefield and Leeds. He missed the end of the last campaign due to an arm injury.

Summary Consistency: 0.98814, Factuality: 0.95526

**Reference:** Surman, 28, arrives back at Dean Court having previously spent two spells on loan at the Championship club. He spent last season with Bournemouth, making 39 appearances, and was also at the Cherries during the 2005-06 season. The former England Under-21 international started his career at Southampton before joining Wolverhampton Wanderers in 2009. Surman joined Norwich in 2010 and made 58 appearances for the Canaries.

**Generated Output:** Surman, 28, has returned to Bournemouth after two loan spells at the Championship club. He previously played for Southampton, Wolverhampton Wanderers, and Norwich before joining Bournemouth last season, where he made 39 appearances.

Summary Consistency: 0.53143, Factuality: 0.40897

Reference: Sarah Johnson was one of 21 women heading to Liverpool when their minibus was hit by a lorry on the M62. Her friend Bethany Jones, 18, was killed while Ms Johnson and several others were badly hurt. Minibus driver James Johnson was jailed for more than six years for causing Bethany's death, in April 2013. Ms Johnson, who broke her shoulder, back and pelvis, said the help she received from a charity while in hospital led her to want to support others. Speaking publicly for the first time about the crash, Ms Johnson described how everyone was "excited and giddy" for the hen party. "To me the impact was just a massive explosion," she said. "I thought the bus had blown up. "I remember the bus dropping on its side. The next thing, I woke up on the roadside so I'd actually come out of the window." Ms Johnson was taken to Leeds General Infirmary where she, along with Bethany's sister Amy Firth, underwent major surgery and spent time in intensive care. Whilst she was there she got support from charity Day One, which helps victims of major trauma. She said: "It's absolutely fantastic. "It supports people by giving benefit advice, legal advice and peer support such as me and Amy, who have been in similar situations and who are now helping other people who've suffered from major trauma." Ms Johnson said the crash had made her realise how lucky she had been. "Beth can't complain, she's not here," she added. "We just have to be grateful for what we've got."

**Generated Output:** Sarah Johnson was involved in a tragic accident on the M62 that resulted in the death of her friend Bethany Jones and left her and several others badly injured. The minibus driver was jailed for causing Bethany's death. Sarah received support from a charity while in hospital, which inspired her to want to help others. She described the crash as a "massive explosion" and praised the charity for providing benefit and legal advice, as well as peer support. Sarah emphasized the importance of being grateful for what they have, as her friend Bethany is no longer alive.

Summary Consistency: 0.71286, Factuality: 0.83808

**Reference:** Aiton, 30, had scans to diagnose the injury on Monday. He joined the Dragons from Leeds at the end of 2015, and missed the end of the last campaign with an arm injury. The Papua New Guinea player played 94 games for both Wakefield and Leeds following his move from Cronulla-Sutherland Sharks in 2012.

**Generated Output:** Aiton, a 30-year-old player for the Dragons, had scans on Monday to diagnose an injury. He joined the team in 2015 and previously played for Wakefield and Leeds. He missed the end of the last season due to an arm injury.

Summary Consistency: 0.98847, Factuality: 0.95598

Reference: Northern Ireland's world number three is due to tee off with Americans Dustin Johnson and Rickie Fowler at 02:45 GMT (10:45 local time) on Thursday. The 26-year-old currently leads the Race to Dubai rankings with just three tournaments remaining. "I'm not feeling great. I ate something a couple of nights ago and Tuesday wasn't good at all," he said. "I thought I would be better Wednesday morning, but I had a piece of toast and a couple of bits of melon for breakfast and I came here and tried to hit some balls, but even just making a couple of swings my stomach was too sore. "I just need another day of rest and hopefully I will be better tomorrow and I can play." Four-time major winner McIlroy is

the only two-time winner of the Race to Dubai - the European Tour's season-long event - having claimed titles in 2012 and 2014. He currently leads England's Danny Willett, Irishman Shane Lowry and South African Louis Oosthuizen.

**Generated Output:** Northern Ireland's world number three, Rory McIlroy, is set to tee off with Dustin Johnson and Rickie Fowler at the upcoming tournament. Despite leading the Race to Dubai rankings, McIlroy is feeling unwell and unsure if he will be able to play due to a stomach issue. He is hoping that a

Summary Consistency: 0.14175, Factuality: 0.94076

**Reference:** Parts of the Mariana Trench in the Pacific Ocean are up to 11 kilometres deep, so we know little about what sea life there is. So a team has been sending down a robotic submarine called Deep Discoverer with a camera on it. Science fans or anyone who is just curious can check out what the camera is showing online. The three-month expedition is looking for things like fish, mud volcanoes and deep sea coral. So far they've spotted shrimp, jellyfish and black pillow lava from an underwater eruption.

**Generated Output:** The Mariana Trench in the Pacific Ocean is extremely deep, making it difficult to study the sea life there. A team is using a robotic submarine with a camera to explore and share their findings online. The expedition is focused on discovering fish, mud volcanoes, and deep sea coral. They have already seen shrimp,

Summary Consistency: 0.603, Factuality: 0.97074

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop, 25, and Cooke, 20, have both had loan spells at various clubs and have now been signed by League One Blackpool, who have made a total of nine signings this summer. More football transfer news can be found on a dedicated page.

Summary Consistency: 0.98023, Factuality: 0.96934

Reference: The Sky Blues currently play in Coventry's Ricoh Arena but had a long dispute with the stadium's previous owners. The council said the club wanted to meet to understand how it would deal with a planning application. The club said it was not commenting "at this stage". The club's owners, Sisu, have been involved in a longrunning stand off with the previous operators of the Ricoh that saw the Sky Blues play the 2013/14 season in Northampton. The arena is now owned by Premiership rugby team Wasps. In a statement, Rugby Borough Council said its leader and the council's executive director and head of planning had met with Coventry City in March. "The club requested the meeting to understand how the council would deal with any planning application for potential stadium sites in the borough of Rugby," it said. It said the plans would need to be finalised by September to be included in the council's local plan, but added that a site had yet to be identified. Peter Ward, from Sky Blues Supporters' Consultative Group, said he was pleased to hear that things were "moving" with the club's search for a new home. "It's good that finally there is some evidence things are happening," he said. "As we've heard from the club's directors, there is a need to take control of and have access to all the revenue streams." However, he said that fans could find a move out of Coventry

difficult - particularly as they only moved from their previous home, Highfield Road, to the Ricoh in 2005. "The move from Highfield Road to the Ricoh was a big emotional move for the fans," he said. "This would be another big change."

**Generated Output:** Coventry City FC had a long dispute with the previous owners of the Ricoh Arena and played a season in Northampton as a result. The club is now meeting with the council to discuss potential stadium sites in Rugby. Fans may find a move out of Coventry difficult, as they have a strong emotional attachment to the Ricoh Arena.

Summary Consistency: 0.58644, Factuality: 0.84877

**Reference:** Parts of the Mariana Trench in the Pacific Ocean are up to 11 kilometres deep, so we know little about what sea life there is. So a team has been sending down a robotic submarine called Deep Discoverer with a camera on it. Science fans or anyone who is just curious can check out what the camera is showing online. The three-month expedition is looking for things like fish, mud volcanoes and deep sea coral. So far they've spotted shrimp, jellyfish and black pillow lava from an underwater eruption.

**Generated Output:** The Mariana Trench in the Pacific Ocean is up to 11 kilometres deep, making it difficult to study the sea life in the area. A team has been using a robotic submarine called Deep Discoverer with a camera to explore and document the deep sea. The expedition is looking for fish, mud volcanoes, and deep sea coral, and has spotted shrimp, jellyfish, and black pillow lava from an underwater eruption so far. Interested individuals can view the live feed online.

Summary Consistency: 0.72915, Factuality: 0.94885

Reference: Her best-known films include 1938's Quai des Brumes (Port of Shadows), in which she starred alongside Jean Gabin. She also appeared in Carol Reed's The Fallen Idol and opposite Humphrey Bogart in Passage to Marseille. In a statement, French president Francois Hollande said she "personified elegance and grace". He said: "Michele Morgan was more than just a gaze. Her legend left its mark on many generations." Morgan's Cannes award came in 1946 for her role as a blind woman in La Symphonie Pastorale (Pastoral Symphony). In later life, she received lifetime achievement accolades at the Venice Film Festival and the Cesar Awards, as well as a star on the Hollywood Walk of Fame. Morgan was considered for the role of Ilsa Lund in Casablanca, but lost out to Ingrid Bergman when film studio RKO refused to loan her to Warner Bros. Her film career faded with the arrival of the French New Wave in the 1960s, although she continued to work in television and on stage. Follow us on Facebook, on Twitter @BBCNewsEnts, or on Instagram at bbcnewsents. If you have a story suggestion email entertainment.news@bbc.co.uk.

**Generated Output:** Michele Morgan was a French actress known for her roles in various films, including Quai des Brumes, The Fallen Idol, and Passage to Marseille. She was praised for her elegance and grace by French president Francois Hollande. Morgan won the Cannes award in 1946 for her role in La Symphonie Pastorale. Despite being considered for a role in Casablanca, her film career declined with the rise of the French New Wave in the 1960s. She received lifetime achievement awards and has a star on the Hollywood Walk of Fame. Morgan continued to work in television and on stage later in her career.

Summary Consistency: 0.98601, Factuality: 0.95436

Reference: Northern Ireland's world number three is due to tee off with Americans Dustin Johnson and Rickie Fowler at 02:45 GMT (10:45 local time) on Thursday. The 26-year-old currently leads the Race to Dubai rankings with just three tournaments remaining. "I'm not feeling great. I ate something a couple of nights ago and Tuesday wasn't good at all," he said. "I thought I would be better Wednesday morning, but I had a piece of toast and a couple of bits of melon for breakfast and I came here and tried to hit some balls, but even just making a couple of swings my stomach was too sore. "I just need another day of rest and hopefully I will be better tomorrow and I can play." Four-time major winner McIlroy is the only two-time winner of the Race to Dubai - the European Tour's season-long event having claimed titles in 2012 and 2014. He currently leads England's Danny Willett, Irishman Shane Lowry and South African Louis Oosthuizen.

**Generated Output:** Northern Ireland's world number three, Rory McIlroy, is set to tee off with Dustin Johnson and Rickie Fowler at the upcoming tournament. Despite leading the Race to Dubai rankings, McIlroy is feeling unwell and unsure if he will be able to play due to a stomach issue. He is hoping that a

Summary Consistency: 0.14175, Factuality: 0.94076

**Reference:** Parts of the Mariana Trench in the Pacific Ocean are up to 11 kilometres deep, so we know little about what sea life there is. So a team has been sending down a robotic submarine called Deep Discoverer with a camera on it. Science fans or anyone who is just curious can check out what the camera is showing online. The three-month expedition is looking for things like fish, mud volcanoes and deep sea coral. So far they've spotted shrimp, jellyfish and black pillow lava from an underwater eruption.

**Generated Output:** The Mariana Trench in the Pacific Ocean is extremely deep, making it difficult to study the sea life there. A team is using a robotic submarine with a camera to explore and share their findings online. The expedition is focused on discovering fish, mud volcanoes, and deep sea coral. They have already seen shrimp,

Summary Consistency: 0.603, Factuality: 0.97074

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop, 25, and Cooke, 20, have both had loan spells at various clubs and have now been signed by League One Blackpool, who have made a total of nine signings this summer. More football transfer news can be found on a dedicated page.

Summary Consistency: 0.98023, Factuality: 0.96934

Reference: Northern Ireland's world number three is due to tee off with Americans Dustin Johnson and Rickie Fowler at 02:45 GMT (10:45 local time) on Thursday. The 26-year-old currently leads the Race to Dubai rankings with just three tournaments remaining. "I'm not feeling great. I ate something a couple of nights ago and Tuesday wasn't good at all," he said. "I thought I would be better Wednesday morning, but I had a piece of toast and a couple of bits of melon for breakfast and I came here and tried to hit some balls, but even just making a couple of swings my stomach was too sore. "I just need another day of rest and hopefully I will be better tomorrow and I can play." Four-time major winner McIlroy is

the only two-time winner of the Race to Dubai - the European Tour's season-long event - having claimed titles in 2012 and 2014. He currently leads England's Danny Willett, Irishman Shane Lowry and South African Louis Oosthuizen.

**Generated Output:** Northern Ireland's world number three, Rory McIlroy, is set to tee off with Dustin Johnson and Rickie Fowler at the upcoming tournament. Despite leading the Race to Dubai rankings, McIlroy is feeling unwell and unsure if he will be able to play due to a stomach issue. He is hoping that a

Summary Consistency: 0.14175, Factuality: 0.94076

**Reference:** Parts of the Mariana Trench in the Pacific Ocean are up to 11 kilometres deep, so we know little about what sea life there is. So a team has been sending down a robotic submarine called Deep Discoverer with a camera on it. Science fans or anyone who is just curious can check out what the camera is showing online. The three-month expedition is looking for things like fish, mud volcanoes and deep sea coral. So far they've spotted shrimp, jellyfish and black pillow lava from an underwater eruption.

**Generated Output:** The Mariana Trench in the Pacific Ocean is extremely deep, making it difficult to study the sea life there. A team is using a robotic submarine with a camera to explore and share their findings online. The expedition is focused on discovering fish, mud volcanoes, and deep sea coral. They have already seen shrimp,

Summary Consistency: 0.603, Factuality: 0.97074

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop, 25, and Cooke, 20, have both had loan spells at various clubs and have now been signed by League One Blackpool, who have made a total of nine signings this summer. More football transfer news can be found on a dedicated page.

Summary Consistency: 0.98023, Factuality: 0.96934

Reference: Northern Ireland's world number three is due to tee off with Americans Dustin Johnson and Rickie Fowler at 02:45 GMT (10:45 local time) on Thursday. The 26-year-old currently leads the Race to Dubai rankings with just three tournaments remaining. "I'm not feeling great. I ate something a couple of nights ago and Tuesday wasn't good at all," he said. "I thought I would be better Wednesday morning, but I had a piece of toast and a couple of bits of melon for breakfast and I came here and tried to hit some balls, but even just making a couple of swings my stomach was too sore. "I just need another day of rest and hopefully I will be better tomorrow and I can play." Four-time major winner McIlroy is the only two-time winner of the Race to Dubai - the European Tour's season-long event having claimed titles in 2012 and 2014. He currently leads England's Danny Willett, Irishman Shane Lowry and South African Louis Oosthuizen.

**Generated Output:** Northern Ireland's world number three golfer is set to play alongside Dustin Johnson and Rickie Fowler, but is feeling unwell and may not be able to compete due to stomach issues. Despite leading the Race to Dubai rankings, he may need another

day of rest before he can play. The golfer is aiming to become

Summary Consistency: 0.28458, Factuality: 0.5259

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Two players, Allsop and Cooke, have been signed by League One Blackpool after successful loan spells and achievements in their career. Blackpool have signed a total of nine players this summer. Keep up with all the latest football transfers on their dedicated page.

Summary Consistency: 0.89732, Factuality: 0.65282

**Reference:** Aiton, 30, had scans to diagnose the injury on Monday. He joined the Dragons from Leeds at the end of 2015, and missed the end of the last campaign with an arm injury. The Papua New Guinea player played 94 games for both Wakefield and Leeds following his move from Cronulla-Sutherland Sharks in 2012.

**Generated Output:** Aiton, a 30-year-old rugby player for the Dragons, recently had scans to diagnose an injury. He joined the team in 2015 and missed the end of the last season due to an arm injury. Prior to joining the Dragons, he played 94 games for both Wakefield and Leeds after moving from

Summary Consistency: 0.9717, Factuality: 0.86258

Reference: Northern Ireland's world number three is due to tee off with Americans Dustin Johnson and Rickie Fowler at 02:45 GMT (10:45 local time) on Thursday. The 26-year-old currently leads the Race to Dubai rankings with just three tournaments remaining. "I'm not feeling great. I ate something a couple of nights ago and Tuesday wasn't good at all," he said. "I thought I would be better Wednesday morning, but I had a piece of toast and a couple of bits of melon for breakfast and I came here and tried to hit some balls, but even just making a couple of swings my stomach was too sore. "I just need another day of rest and hopefully I will be better tomorrow and I can play." Four-time major winner McIlroy is the only two-time winner of the Race to Dubai - the European Tour's season-long event having claimed titles in 2012 and 2014. He currently leads England's Danny Willett, Irishman Shane Lowry and South African Louis Oosthuizen.

**Generated Output:** Northern Ireland's world number three, Rory McIlroy, is set to tee off with Dustin Johnson and Rickie Fowler at the upcoming tournament. Despite leading the Race to Dubai rankings, McIlroy is feeling unwell and unsure if he will be able to play due to stomach issues. The four-time major winner is a two-time winner of the Race to Dubai and currently leads in the standings ahead of Danny Willett, Shane Lowry, and Louis Oosthuizen.

Summary Consistency: 0.33126, Factuality: 0.95925

Reference: The children, who had previously lived in areas controlled by Boko Haram, were held in a military barracks in the north-eastern city of Maiduguri, a UN spokesman told the BBC. Details of the children's ages and the length of their detention have not been given. The army has not made any comment. Human rights groups argue that there is no proper legal process for civilians, including children, who are detained by the army as part of their counter-insurgency operations. "We fear that there are still kids who are being at least temporarily detained because they are being released from Boko Haram areas by the army but then kept for a while," Manuel Fontaine, regional director for the UN Children's fund (Unicef) in Central and West Africa, told Reuters news agency. Earlier this month, 21 of the more than 200 Chibok schoolgirls abducted by Boko Haram two years ago were released and reunited with their families. Nigeria has been fighting a seven-year insurgency against Boko Haram, with the army retaking much of the territory under the Islamist militants' control in the past 20 months. 'Boko Haram took my children' Town divided by Boko Haram legacy On patrol against Boko Haram Who are Boko Haram?

**Generated Output:** Children who were previously living in areas controlled by Boko Haram are being held in a military barracks in Maiduguri. Details about their ages and the length of their detention have not been provided, and human rights groups are concerned about the lack of legal processes for civilians, including children, detained by the army during counter-insurgency operations. The UN Children's Fund is also worried that more children may still be held by the military after being rescued from Boko Haram. Nigeria has been fighting against Boko Haram for seven years, with significant territorial gains made in the past 20 months.

Summary Consistency: 0.62933, Factuality: 0.96866

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop and Cooke, two young footballers, have had loan spells at various clubs and have now been signed by League One Blackpool. Blackpool have made a total of nine new signings this summer. Check out the latest football transfers on our dedicated page.

Summary Consistency: 0.9595, Factuality: 0.89065

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop, 25, and Cooke, 20, have both made significant achievements in their careers so far, with experience in the Premier League and loan spells at various clubs. Blackpool has signed a total of nine players this summer, including the two mentioned. Stay up to date with all the latest football transfers on the dedicated page.

Summary Consistency: 0.53668, Factuality: 0.74958

**Reference:** John Morley, 29, of Deanstown, Finglas West, is alleged to have carried out a sustained weekend attack at the Chimney Corner Hotel in Mallusk. The victim, Derek White, was said to have been stabbed in the chest and leg. Mr Morley, is charged with the attempted wounding of Mr White and possession of an offensive weapon with intent to commit an offence. He is further accused of disorderly behaviour and possession of Class B drugs, namely cannabis. He will not be released from custody until all conditions are met - including the lodgement of a  $\hat{A}\pm2,000$  cash surety. Police detained him after being called to the hotel just outside north Belfast in the early hours of Sunday. Paramedics were already on the scene treating Mr White, who is believed to be aged in his 30s. At the defendant's first appearance before Belfast Magistrates' Court it was alleged that he chased the victim through the hotel with a flick knife. A police officer revealed the two men had travelled to Northern Ireland with their children for a football match.

**Generated Output:** John Morley, 29, from Deanstown, Finglas West, is accused of attacking Derek White at the Chimney Corner Hotel in Mallusk. He allegedly stabbed Mr. White in the chest and leg, and is charged with attempted wounding, possession of an offensive weapon, disorderly behavior, and possession of cannabis. Morley will remain in custody until a £2,000 cash surety is lodged. The incident occurred during a weekend football match trip to Northern Ireland.

Summary Consistency: 0.71035, Factuality: 0.91532

**Reference:** Aiton, 30, had scans to diagnose the injury on Monday. He joined the Dragons from Leeds at the end of 2015, and missed the end of the last campaign with an arm injury. The Papua New Guinea player played 94 games for both Wakefield and Leeds following his move from Cronulla-Sutherland Sharks in 2012.

**Generated Output:** Aiton, who is 30 years old, had scans on Monday to diagnose an injury. He joined the Dragons in 2015 and missed the end of the last season due to an arm injury. Aiton, originally from Papua New Guinea, played a total of 94 games for Wakefield and Leeds after moving from Cronulla-Sutherland Sharks in 2012.

Summary Consistency: 0.99018, Factuality: 0.96805

Reference: The Sky Blues currently play in Coventry's Ricoh Arena but had a long dispute with the stadium's previous owners. The council said the club wanted to meet to understand how it would deal with a planning application. The club said it was not commenting "at this stage". The club's owners, Sisu, have been involved in a longrunning stand off with the previous operators of the Ricoh that saw the Sky Blues play the 2013/14 season in Northampton. The arena is now owned by Premiership rugby team Wasps. In a statement, Rugby Borough Council said its leader and the council's executive director and head of planning had met with Coventry City in March. "The club requested the meeting to understand how the council would deal with any planning application for potential stadium sites in the borough of Rugby," it said. It said the plans would need to be finalised by September to be included in the council's local plan, but added that a site had yet to be identified. Peter Ward, from Sky Blues Supporters' Consultative Group, said he was pleased to hear that things were "moving" with the club's search for a new home. "It's good that finally there is some evidence things are happening," he said. "As we've heard from the club's directors, there is a need to take control of and have access to all the revenue streams." However, he said that fans could find a move out of Coventry difficult - particularly as they only moved from their previous home, Highfield Road, to the Ricoh in 2005. "The move from Highfield Road to the Ricoh was a big emotional move for the fans," he said. "This would be another big change."

**Generated Output:** Coventry City FC had a long dispute with the previous owners of the Ricoh Arena and played a season in Northampton as a result. The club is now meeting with the council to discuss potential stadium sites in Rugby. Fans may find a move out of Coventry difficult, as they have a strong emotional attachment to the Ricoh Arena.

Summary Consistency: 0.58644, Factuality: 0.84877

**Reference:** Parts of the Mariana Trench in the Pacific Ocean are up to 11 kilometres deep, so we know little about what sea life there is. So a team has been sending down a robotic submarine called Deep Discoverer with a camera on it. Science fans or anyone who is just curious can check out what the camera is showing online. The three-month expedition is looking for things like fish, mud volcanoes and deep sea coral. So far they've spotted shrimp, jellyfish and black pillow lava from an underwater eruption.

**Generated Output:** The Mariana Trench in the Pacific Ocean is up to 11 kilometres deep, making it difficult to study the sea life in the area. A team has been using a robotic submarine called Deep Discoverer with a camera to explore and document the deep sea. The expedition is looking for fish, mud volcanoes, and deep sea coral, and has spotted shrimp, jellyfish, and black pillow lava from an underwater eruption so far. Interested individuals can view the live feed online.

Summary Consistency: 0.72915, Factuality: 0.94885

Reference: Her best-known films include 1938's Quai des Brumes (Port of Shadows), in which she starred alongside Jean Gabin. She also appeared in Carol Reed's The Fallen Idol and opposite Humphrey Bogart in Passage to Marseille. In a statement, French president Francois Hollande said she "personified elegance and grace". He said: "Michele Morgan was more than just a gaze. Her legend left its mark on many generations." Morgan's Cannes award came in 1946 for her role as a blind woman in La Symphonie Pastorale (Pastoral Symphony). In later life, she received lifetime achievement accolades at the Venice Film Festival and the Cesar Awards, as well as a star on the Hollywood Walk of Fame. Morgan was considered for the role of Ilsa Lund in Casablanca, but lost out to Ingrid Bergman when film studio RKO refused to Ioan her to Warner Bros. Her film career faded with the arrival of the French New Wave in the 1960s, although she continued to work in television and on stage. Follow us on Facebook, on Twitter @BBCNewsEnts, or on Instagram at bbcnewsents. If you have a story suggestion email entertainment.news@bbc.co.uk.

Generated Output: Michele Morgan was a French actress known for her roles in various films, including Quai des Brumes, The Fallen Idol, and Passage to Marseille. She was praised for her elegance and grace by French president Francois Hollande. Morgan won the Cannes award in 1946 for her role in La Symphonie Pastorale. Despite being considered for a role in Casablanca, her film career declined with the rise of the French New Wave in the 1960s. She received lifetime achievement awards and has a star on the Hollywood Walk of Fame. Morgan continued to work in television and on stage later in her career.

Summary Consistency: 0.98601, Factuality: 0.95436

**Reference:** Northern Ireland's world number three is due to tee off with Americans Dustin Johnson and Rickie Fowler at 02:45 GMT (10:45 local time) on Thursday. The 26-year-old currently leads the Race to Dubai rankings with just three tournaments remaining. "I'm not feeling great. I ate something a couple of nights ago and Tuesday wasn't good at all," he said. "I thought I would be better Wednesday morning, but I had a piece of toast and a

couple of bits of melon for breakfast and I came here and tried to hit some balls, but even just making a couple of swings my stomach was too sore. "I just need another day of rest and hopefully I will be better tomorrow and I can play." Four-time major winner McIlroy is the only two-time winner of the Race to Dubai - the European Tour's season-long event - having claimed titles in 2012 and 2014. He currently leads England's Danny Willett, Irishman Shane Lowry and South African Louis Oosthuizen.

**Generated Output:** Northern Ireland's world number three, Rory McIlroy, is set to tee off with Dustin Johnson and Rickie Fowler at the upcoming tournament. Despite leading the Race to Dubai rankings, McIlroy is feeling unwell and unsure if he will be able to play due to stomach issues. The four-time major winner is a two-time winner of the Race to Dubai and currently leads in the standings ahead of Danny Willett, Shane Lowry, and Louis Oosthuizen.

Summary Consistency: 0.33126, Factuality: 0.95925

Reference: The children, who had previously lived in areas controlled by Boko Haram, were held in a military barracks in the north-eastern city of Maiduguri, a UN spokesman told the BBC. Details of the children's ages and the length of their detention have not been given. The army has not made any comment. Human rights groups argue that there is no proper legal process for civilians, including children, who are detained by the army as part of their counter-insurgency operations. "We fear that there are still kids who are being at least temporarily detained because they are being released from Boko Haram areas by the army but then kept for a while," Manuel Fontaine, regional director for the UN Children's fund (Unicef) in Central and West Africa, told Reuters news agency. Earlier this month, 21 of the more than 200 Chibok schoolgirls abducted by Boko Haram two years ago were released and reunited with their families. Nigeria has been fighting a seven-year insurgency against Boko Haram, with the army retaking much of the territory under the Islamist militants' control in the past 20 months. 'Boko Haram took my children' Town divided by Boko Haram legacy On patrol against Boko Haram Who are Boko Haram?

Generated Output: Children who were previously living in areas controlled by Boko Haram are being held in a military barracks in Maiduguri. Details about their ages and the length of their detention have not been provided, and human rights groups are concerned about the lack of legal processes for civilians, including children, detained by the army during counter-insurgency operations. The UN Children's Fund is also worried that more children may still be held by the military after being rescued from Boko Haram. Nigeria has been fighting against Boko Haram for seven years, with significant territorial gains made in the past 20 months.

Summary Consistency: 0.62933, Factuality: 0.96866

**Reference:** Allsop, 25, made his Premier League debut in November 2015 and has spent time on loan at Coventry and Wycombe. Cooke, 20, won the European Championship with England Under-17s in 2014 and scored four goals while on loan at Crewe last season. League One Blackpool have now signed nine players this summer. Find all the latest football transfers on our dedicated page.

**Generated Output:** Allsop and Cooke, two young footballers, have had loan spells at various clubs and have now been signed by League One Blackpool. Blackpool have made a total of nine new signings this summer. Check out the latest football transfers on our dedicated page.

Summary Consistency: 0.9595, Factuality: 0.89065