

# Duck News Reporters: Automated fake news detection through contextual similarity comparison

COMP9491: Applied Artificial Intelligence — Project Report

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July 29, 2023

## Todo list

■ [Introduction] Describe the problem domain and aim of study, briefly introduce the developed methods and summarise your experimental findings . . . . .	1
■ [Related work] <b>Dhruv</b> : Describe the current state-of-the-art or related literature in this problem domain . . . . .	1
■ [Methods/Feature — Gathering contextual articles] <b>Jim</b> : Write . . . . .	2
■ [Methods/Feature — Similarity model] <b>Duke</b> : Write . . . . .	2
■ [Methods/Feature — Non-latent features] <b>Duke</b> : Write . . . . .	2
■ [Methods/Feature — BERT embeddings] <b>Duke</b> : Write . . . . .	2
■ [Methods/Model — Machine learning] <b>Jim</b> : Write . . . . .	2
■ [Methods/Model — Neural networks] <b>Dhruv</b> : Write . . . . .	2
■ [Experimental setup/Dataset] <b>Jim</b> : write . . . . .	2
■ [Experimental setup/Evaluation metrics] <b>Jim</b> : write . . . . .	2
■ [Results and discussion] <b>Jim</b> : Machine learning . . . . .	2
■ [Results and discussion] <b>Dhruv</b> : Neural nets . . . . .	2
■ [Conclusion] Summarise the study and discuss directions for future improvement . . . . .	2
■ [Individual contributions] <b>Jim</b> : ~1pg detailing individual contributions . . . . .	4
■ [Individual contributions] <b>Dhruv</b> : ~1pg detailing individual contributions . . . . .	4
■ [Individual contributions] <b>Duke</b> : ~1pg detailing individual contributions . . . . .	4

## 1 Introduction

■ [Introduction] Describe the problem domain and aim of study, briefly introduce the developed methods and summarise your experimental findings

## 2 Related work

■ [Related work] **Dhruv**: Describe the current state-of-the-art or related literature in this problem domain

## 3 Methods

### 3.1 Feature — Gathering contextual articles

[Methods/Feature — Gathering contextual articles] **Jim:** Write

### 3.2 Feature — Similarity model

[Methods/Feature — Similarity model] **Duke:** Write

### 3.3 Feature — Non-latent features

[Methods/Feature — Non-latent features] **Duke:** Write

### 3.4 Feature — BERT embeddings

[Methods/Feature — BERT embeddings] **Duke:** Write

### 3.5 Model — Machine learning

[Methods/Model — Machine learning] **Jim:** Write

### 3.6 Model — Neural networks

[Methods/Model — Neural networks] **Dhruv:** Write

## 4 Experimental setup

### 4.1 Dataset

[Experimental setup/Dataset] **Jim:** write

### 4.2 Evaluation metrics

[Experimental setup/Evaluation metrics] **Jim:** write

## 5 Results and discussion

[Results and discussion] **Jim:** Machine learning

[Results and discussion] **Dhruv:** Neural nets

## 6 Conclusion

[Conclusion] Summarise the study and discuss directions for future improvement

## References

- [1] Benjamin Horne and Sibel Adali. “This just in: Fake news packs a lot in title, uses simpler, repetitive content in text body, more similar to satire than real news”. In: *Proceedings of the international AAAI conference on web and social media*. Vol. 11. 1. 2017, pp. 759–766.

# A Individual contributions

Jim   Dhruv   Duke

## A.1 Jim

[Individual contributions] **Jim:** ~1pg detailing individual contributions

## A.2 Dhruv

[Individual contributions] **Dhruv:** ~1pg detailing individual contributions

## A.3 Duke

[Individual contributions] **Duke:** ~1pg detailing individual contributions