

POFMA TEAM

Wednesday 04/08/2021

Newsletter

Edition: 001

“Fake News Detector”



Au Yong Ting Ting, Sim Jing Wei, Chen Xiangzhen Samson, Tan Ding Xiang

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01

Team Introduction



Team Member No. 1

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Au Yong Ting Ting

Y3 IS Major (BA) & DSA

Favourite Quote: “There’s a will, there’s a way” -
George Herbert

Hobbies: Playing mobile games, watching
documentaries, watersports

Aspiration: Data Analyst -> Data Scientist



Team Member No. 2

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Sim Jing Wei

Y3 IS Major (BA & DCS), AI

Favourite Quote: -

Hobbies: Movies, books, sports, dogs, travelling

Aspiration: 4 days work week

Team Member No. 3

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Samson Chen

Y2 Econs Major (DSA)

Favourite Quote: “To Dare Is To Do” - Tottenham Hotspur

Hobbies: Cycling, Badminton, Watching Football Matches

Aspiration: To become a Data Analyst



Team Member No. 4

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Tan Ding Xiang

Y1 IS Major

Favourite quote: Be water, my friend - Bruce Lee

Hobbies: Playing computer games/ guitar , watching anime , traveling , playing with cats

Aspiration: To travel and explore the world

02 Problem Statement

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- i) The spread of fake news online has far reaching implications for the lives of the people offline.
- ii) We hope we can use Natural Language Processing (NLP) in our project to detect fake news from the real one.

Research

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Fake news encapsulates pieces of news that may be hoaxes and is generally spread through social media and other online media.

Implications of Fake News:

- Distrust in the media & public unrest
- Undermining the democratic process (US Election 2020)
- Platforms for harmful conspiracy theories and hate speech
- Spread of false or discredited science e.g. anti-vax movement

Singapore

6 in 10 people in Singapore have received fake COVID-19 news, likely on social media: Survey

- **Fake Coronavirus Cures:** A recipe circulating on social media claimed that garlic cured coronavirus.



Anti-vaxxer disinformation in Asia endangers millions, jeopardising fight against Covid-19

Jul 1, 2021, 7:13 am



Twitter temporarily blocks US Republican Greene for Covid-19 posts

Jul 20, 2021, 2:13 pm

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Project Scope



Project Scope

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- Understand the Problem Statement
- Perform Data Cleaning and Exploratory Data Analysis
- Data Visualization using a Dashboard
- Preparing the data for Model Building (Tokenizing , Padding, Word Embedding)
- Building Text Classification Models (E.g. SpaCy, Scikit-learn, TensorFlow)
- Assess & Compare the Model Performance (Random Forest, Naive Bayes, SVM, RNN)
- Deploy a Telegram bot/web application where user can just drop a news article link for fake news detector

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Project Timeline

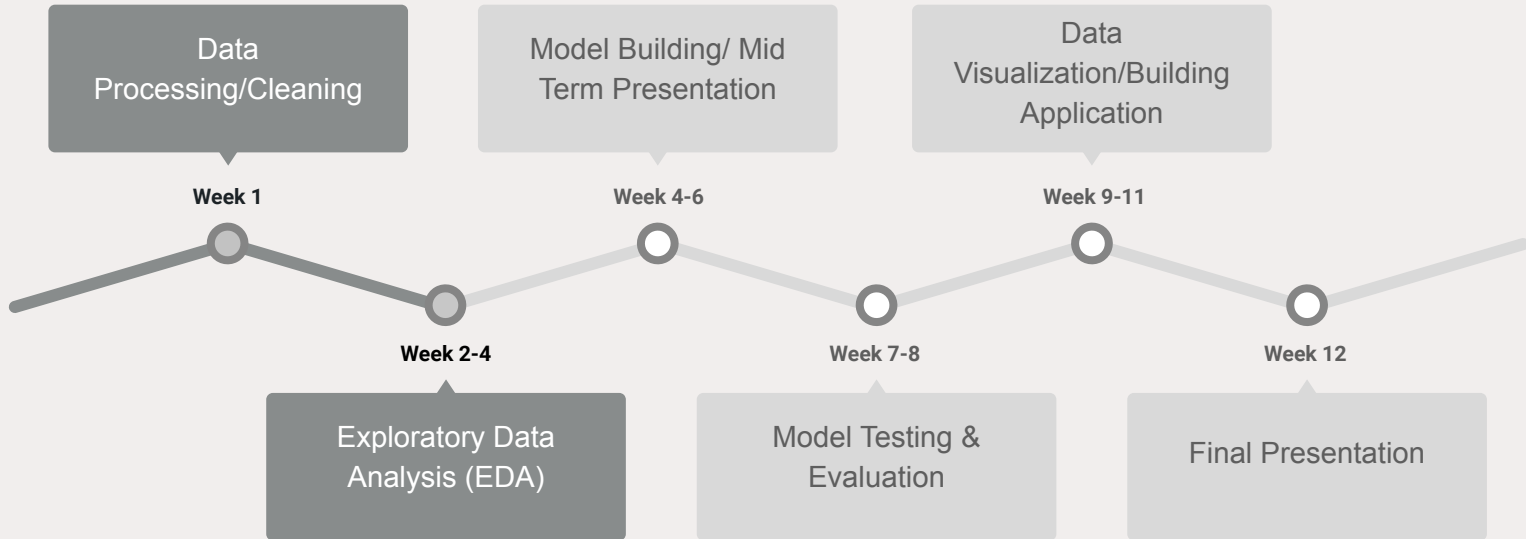


Timeline

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Source of Dataset(s)



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id	title	author	text	label
0	House Dem Aide: We Didn't Even See Comey's Letter Until Jason	Darrell Lucas	House Dem Aide: We	1
1	FLYNN: Hillary Clinton, Big Woman on Campus - Breitbart	Daniel J. Flynn	Ever get the feeling your li	0
2	Why the Truth Might Get You Fired	Consortiumnews.com	Why the Truth Might Get	1
3	15 Civilians Killed In Single US Airstrike Have Been Identified	Jessica Purkiss	Videos 15 Civilians Killed	1
4	Iranian woman jailed for fictional unpublished story about woman stone	Howard Portnoy	Print	1
5	Jackie Mason: Hollywood Would Love Trump if He Bombed North Korea	Daniel Nussbaum	In these trying times, Jacki	0
6	Life: Life Of Luxury: Elton John's 6 Favorite Shark Pictures To Stare At	nan	Ever wonder how	1
7	Benoît Hamon Wins French Socialist Party's Presidential Nominatio	Alissa J. Rubin	PARIS — France chose a	0
8	Excerpts From a Draft Script for Donald Trump's Q&A With a Black	nan	Donald J. Trump is schedu	0
9	A Back-Channel Plan for Ukraine and Russia, Courtesy of Trump Associat	Megan Twohey and Sc	A week before Michael T.	0
10	Obama's Organizing for Action Partners with Soros-Linked "Indivisi	Aaron Klein	Organizing for Action, the	0
11	BBC Comedy Sketch "Real Housewives of ISIS" Causes Outrage	Chris Tomlinson	The BBC produced spoof o	0
12	Russian Researchers Discover Secret Nazi Military Base "Treasure Hun	Amando Flavio	The mystery surrounding	1
13	US Officials See No Link Between Trump and Russia	Jason Ditz	Clinton Campaign	1
14	Re: Yes, There Are Paid Government Trolls On Social Media, Blogs, Forum	AnotherAnnie	Yes, There Are Paid	

The training dataset used will be sourced from Kaggle

https://www.kaggle.com/clmentbisailon/fake-and-real-news-dataset&sa=D&source=editors&ust=1627998167127000&usg=AFQjCNEZ7tr85VQ7tGXd9Pmt_a_1uNdNbQ)

Contains 20,387 News Articles

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Tools & Technologies



Tools & Technologies

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Google Colab
(Notebook/Editor)



GitHub (Open Source
Code)



Kaggle (Datasets)



Tableau Public
(Data Visualization)



Scikit-learn
(ML Model Training)



Textblob
(Sentiment Analysis)



TensorFlow
(Deep Learning
Model Training)



Beautiful Soup 4
(Web Scraping)

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Personal Goals



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Gain more knowledge in working around with data (e.g. Machine Learning, Neural Networks) and develop soft skills required in the working environment.

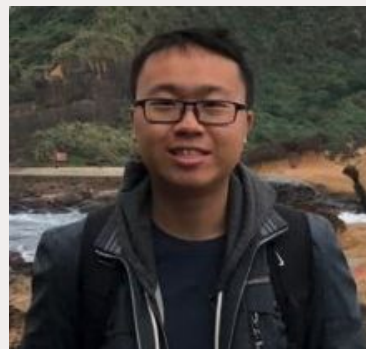


Learn more about Data Science & Machine Learning

Gain practical experience through this project



Explore different ML concepts and models, and gain insights into the capabilities and applications of ML/AI



To learn more about the various machine learning techniques and make new friends :)

Thank You! :)

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