RESUME & PORTFOLIO

Data Scientist Portfolio

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Muhammad Zydan Priambada

ABOUT ME

NICE TO MEET YOU! I AM

Muhammad Zydan Priambada

Data Scientist Fresh Graduate

I am a Certified Data Scientist looking for a data science entry-level position. Strong foundation in Python-driven data science and SQL database management. Experienced in building end-to-end data pipelines from scraping social media data to sentiment analysis.

EDUCATION

Institut Teknologi Bandung

Bachelor of Physics. GPA: 3.54/4.00
Earth Physics and Complex Systems Research Group

Notable Skills

OTHER SKILLS:

Problem Analysis, ETL, CRISP-DM, Mathematics, Statistics, Visualization, Design

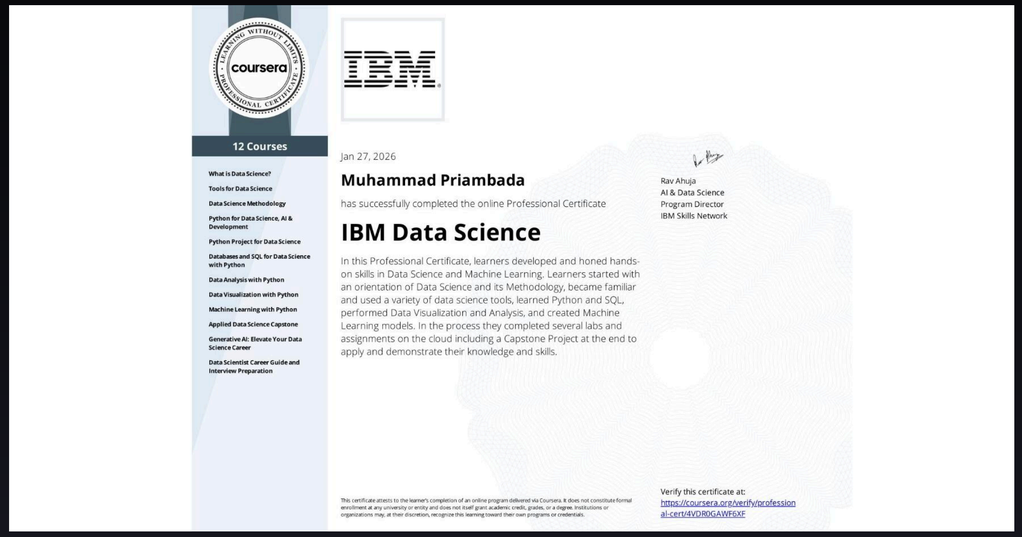
RESUME

Related Certificates

IBM Data Science Professional Certificate

Developed and honed hands-on skills in Data Science and Machine Learning. Started with an orientation of Data Science and its Methodology, became familiar and used a variety of data science tools, learned Python and SQL, performed Data Visualization and Analysis, and created Machine Learning models

Click to see credential



Completed Courses:

- Data Science Introduction
- Tools for Data Science
- Data Science Methodology
- Python for Data Science & Development
- Python Project for Data Science
- Databases and SQL for Data Science with Python
- Data Analysis with Python
- Data Visualization with Python
- Machine Learning with Python
- Applied Data Science Capstone
- Generative AI: Elevate Your Data Science Career

COLLECTION OF PROJECTS

Data Science Projects

Personal Data Science related projects

PROJECT #1

IBM Applied Data Science Capstone: Winning Space Race with Data Science

This project explores SpaceX Falcon 9 launch records to analyze and determine the most optimal launch cost for reusable rocket boosters.
Used classification model to predict the landing outcome, with four different types of models:

- Logistic Regression
- Support Vector Machine
- Decision Tree
- K Nearest Neighbor

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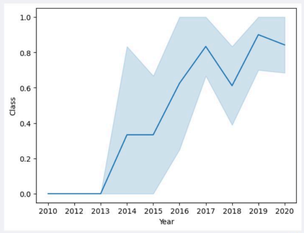
Launch Success Yearly Trend

- Success rate increases as the time goes from year 2013.
- 2018 shows a dip in success rate. This may be caused by lots of experimental launches since it's the debut year for Falcon Heavy, a Falcon 9 variant specialized for heavy payloads.



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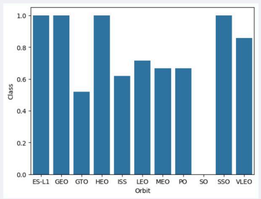
Success Rate vs. Orbit Type



- Orbit types with highest first stage landing success rates are:
  1. Lagrange Point L1 (ES-L1)
  2. Geosynchronous Orbit (GEO)
  3. High Elliptical Orbit (HEO)
  4. Sun-synchronous Orbit (SSO)
- Geostationary transfer orbit (GTO) has the lowest success rate.
- The maximum success rates has orbits that are very far from earth (extreme difficulty), meaning that the parameters are picked carefully to ensure first stage landing success.
- The data can also indicate that low success rates at low altitude orbits may be an experimental launches.

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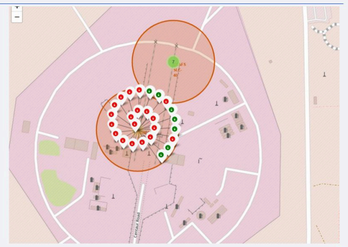
Launch Outcome Markers for Cape Canaveral Site

- There are 26 booster launch attempts on CCAFS LC-40
- Only 7 out of 26 launched boosters successfully landed and able to be reused.
- Looking at the failure outcomes, this site may be the place for experimental launches by SpaceX.



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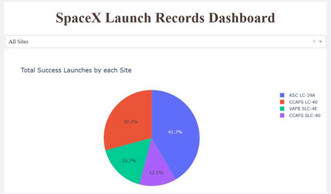
Total Success Launches by each Launch Site

- Kennedy Space Center has the highest launch success rate out of all site. This is because KSC is NASA's primary launch site and specialized in launching civil space exploration and satellites.
- Cape Canaveral Launch Complex is the 2nd highest success rate, followed by Vandenberg and Cape Canaveral Space Launch Complex.



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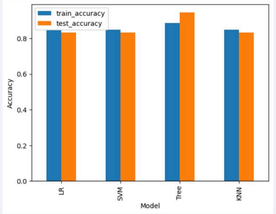
Classification Accuracy



- Logistic Regression, Support Vector Machine (SVM), and K Nearest Neighbors (KNN) has the same test accuracy of 83.33%.
- Decision Tree has the test accuracy of 94.44% which is the highest among all the models.

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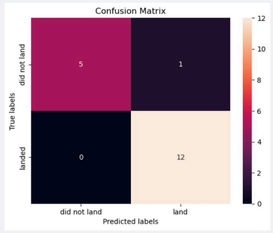
Confusion Matrix

- Confusion Matrix for Decision Tree Model.
- The best model should give the least amount of false positive (predicted booster to land but actually failed to land).
- Decision Tree gives only 1 false positive prediction out of 12 true prediction, therefore Decision Tree is the best model for this prediction.
- However the test dataset is too small, more data records are required to create a more accurate models.



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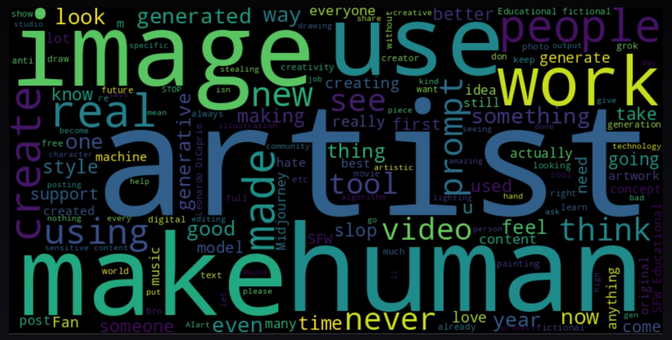

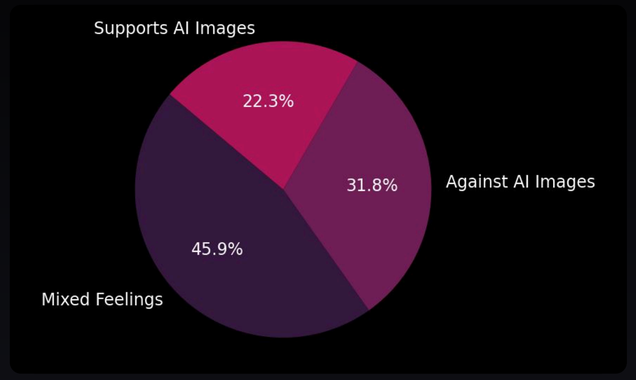

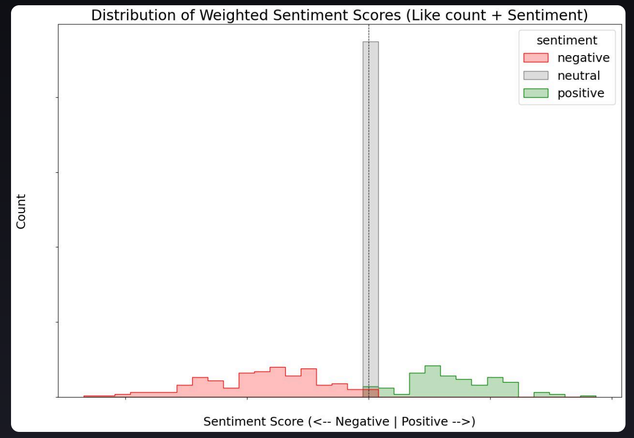

PROJECT #2

Twitter (X) Sentiment Analysis: Public Perception of AI-Generated Arts

Notable tasks include:

- Tweet data scraping using twitterapi.io.
- Data cleaning with semantic filtering.
- Labeling sentiment using roBERTa, a model trained from over 58M tweets.

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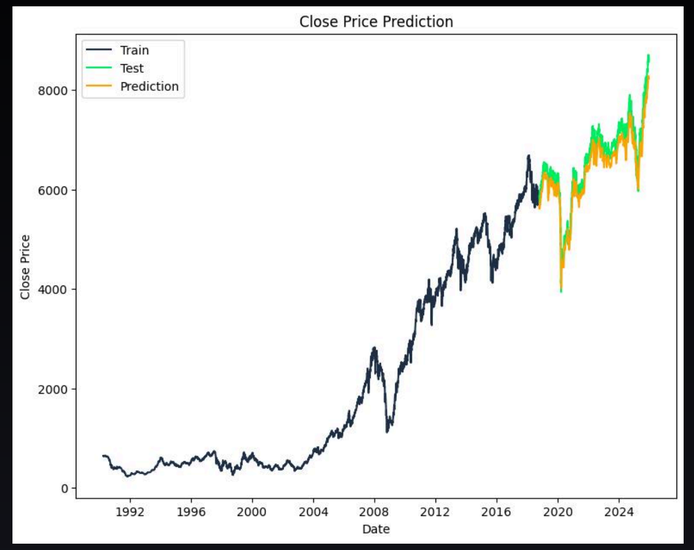

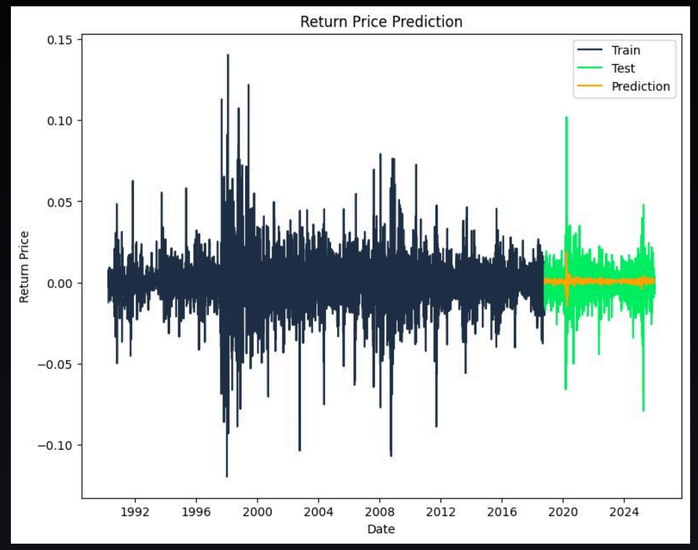

Layer (type)	Output Shape	Param #
lstm (LSTM)	(None, 60, 64)	16,896
lstm_1 (LSTM)	(None, 64)	33,024
dense (Dense)	(None, 128)	8,320
dropout (Dropout)	(None, 128)	0
dense_1 (Dense)	(None, 1)	129

PROJECT #3

IDX Stock Price Predictive Modeling using ARIMA and LSTM

Notable tasks include:

- Gathering stock data from Yahoo Finance
- Testing LSTM model with closing price as a feature
- Measuring RMSE and directional accuracy of the trained model
- Testing daily return as an alternative feature

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