Jash Shah

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EDUCATION

Johns Hopkins University, USA **August 2023 – May 2025(Expected)**
Master of Science in Engineering in Computer Science
Relevant Courses – Algorithms, Machine Translation, Natural Language Processing

University of Mumbai, India **August 2018 – July 2022**
Bachelor of Technology in Information Technology **(CGPA 8.81/10)**
Relevant Courses - Data Structures and Algorithms, Operating Systems, Cloud Computing, Object Oriented Programming, DevOps.

TECHNICAL SKILLS AND CERTIFICATIONS

- **Programming languages** - Python, C++, C, Java, JavaScript, HTML, CSS, PHP, Shell.
- **Tools, technologies, and frameworks** - Scikit-learn, Pandas, NumPy, Matplotlib, NLTK, TensorFlow, Django, PyTorch, Keras, OpenCV, Bootstrap, Android Studio, Flutter, ReactJS, Docker, Flask, AWS(EC2), Git, JIRA, Agile, Scrum, Linux, MS Excel.
- **Databases and BI tools** – MySQL, PostgreSQL, MongoDB, AWS(S3), GCP, Tableau, PowerBI, Grafana.
- **Certifications** - Data Science and Deep Learning Specialization offered on Coursera, and Android App Development offered on Udemy.

PROFESSIONAL EXPERIENCE

The Johns Hopkins University | *Lead Course Assistant – Gateway Computing: Python* **August 2023 – Present**
- Mentoring, supporting, and helping students with coursework in the classroom and conducting quizzes and project discussion classes.
- Reviewing, editing, and grading student assessments and modules and helping with teaching logistics.

Forcepoint, Mumbai, India | *Software Engineer - I* **July 2022 – June 2023**
- Implemented a robust **Certificate Revocation Check** feature in **Python**, bolstering Cloud Web Proxy security. Effectively detected and blocked expired or invalid certificates for accessed websites, substantially enhancing system integrity.
- Improved the code coverage by **12%** by developing test cases for various components of the Cloud Web Proxy.
- Built a **Quick Escalation Issue (EI) Analyzer** that uses a **Slack bot** as a utility to provide most similar **EI JIRA** tickets to the EI ticket that is created. Utilized a combination of **BERT** and **cosine similarity** for the same which improved the EI ticket closing time by about 20%.
- Was awarded with the **Best Business and Engineering Value** award at the Forcepoint Global Hackathon 2022 for the same.

Tech Mahindra, Mumbai, India | *Data Analyst intern* **June 2021 – October 2021**
- Built data warehouses using **Snowflake** and **ETL pipelines** that ingested customer data from a web application with 10,000 daily users.
- Increased the sales demand forecasting accuracy by 7% by creating dashboards of sales data using **PowerBI** and **Tableau**.

InVideo, Mumbai, India | *Data Science intern* **November 2020 – April 2021**
- Optimized the **SQL query** performance and reduced the processing time by about 70% and devised a User Trend Analytics and Prediction System to analyze and predict the usage of about 150 users.
- Introduced a custom module to detect nouns from sentences with the help of **Named Entity Recognition** for retrieving APIs and increased the efficiency by 35%.

PROJECTS

Crypto-currency Investment Scorer | *Python, ML, NLP, Yahoo Finance API, Tweepy API, Flask* | [GitHub]
- Designed and created a model that combined **LSTM** for predicting the price of Bitcoin and **TextBlob** for predicting the sentiment of the market at that point based on the most recent tweets.
- Applied quantitative strategies that gave an investment score with an accuracy of 78% and deployed the model using **Flask**.

A music web-app | *ReactJS, Material-UI, Indexed DB, and YouTube API* | [GitHub]
- Developed a web-application using **ReactJS** that allows users to listen and download latest trending music using **YouTube API**.
- Enabled distinct features such as media player with all controls, recommended songs, shuffle playlist, repeat playlist, sleep timer, trending songs of the country, offline download using **Indexed DB** and Google-o-auth login.

Covid-19 Outbreak Prediction| *Python, Scikit-learn, WebPlotDigitizer* | [paper link]
- Implemented and fine-tuned **time-series forecasting** models like **ARIMA**, **ARMA** and **Holt Winters Exponential Smoothing** for predicting the number of Covid-19 cases for next 5 days for 10 most densely populated countries.
- Obtained highest accuracy of 99.93% for one country and average accuracy of 87%.

A Method for Waste Segregation using Convolutional Neural Networks | *Python, TensorFlow and FastAI* | [paper link]
- Engineered a **custom CNN** model that gave an accuracy of 94.9% and performed a comparative study of models such as **VGG16** and **ResNet-34** for classification of waste as organic and recyclable.

PUBLICATIONS

- **"Bitcoin Investment Classifier using Machine Learning and Sentimental Analysis,"** ICICICT 2022. Published in IEEE Xplore [paper link].
- **"A Method for Waste Segregation using Convolutional Neural Networks,"** ICAECT 2022. Published in IEEE Xplore [paper link].
- **"Outbreak Prediction of COVID-19 for Dense and Populated Countries Using ML".** Ann Data. Sci. 8, 1–19 (2021) [paper link].
- **"Distributed Deep Learning and its Application in Geospatial Analytics"**. CRC Press, Taylor & Francis Group [book chapter].