

Jay Janodia

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GitHub:

github.com/jayjanodia/

Portfolio:

<https://jayjanodia.netlify.com/>

TECHNICAL SKILLS

- **Languages:** Advanced: Python, MySQL. Intermediate: R, MATLAB, Java, Shell. Basic: NoSQL, C, C++.
- **Libraries:** Pytorch, Tensorflow, Matplotlib, NumPy, Pandas, Scikit-Learn, NLTK, OpenCV, SciPy, Seaborn, SpaCy
- **Web Development:** Advanced: HTML, CSS, PostGreSQL, Flask Intermediate: Bootstrap, JavaScript, TypeScript, Jest, ReactJS Basic: NodeJS

WORK EXPERIENCE

Elegen | LIMS Software Developer | San Carlos, CA

July 2023 - March 2024

- Enhanced system functionality through REST endpoint implementation and improved database structure and resolved UI issues, significantly boosting performance.
- Integrated AWS capabilities to address bottlenecks by leveraging AWS lambda functions to improve execution speed from 30 seconds to a couple of seconds.
- Introduced a feature for clients to search genes efficiently and developing a customer-centric solution for viewing data, accelerating results delivery from 10 minutes to a couple of seconds.
- Automated data retrieval for 60 clients using Python, PostGres and Shell Scripting, and assisted them in generating custom data files ahead of time.
- Developed and executed end-to-end unit tests for LIMS while implementing manual test ordering, reducing the risk of test failures. Test cases utilized by 3 employees, ensuring data accuracy, functionality, and workflow efficiency while adhering to best practices with universally-accepted formatting, robust exception handling, and clear code documentation.

Amazon | Software Development Engineer 1 | Sunnyvale, CA

May 2022 - March 2023

- Improved Amazon Developers' Datapath product using HTML, CSS, JS, React, Java and TypeScript resulting in improved customer experience and increased product stability for ~100,000 users.
- Contributed to the migration process from a proprietary platform to Typescript using Python for automation and GraalVM as a Java VM to run JavaScript and TypeScript code reducing the installation time for the customer from 15-30 minutes to a few seconds.
- Built a Unit-testing module using Shell Scripting and Java based on Jest framework, leading to a 500% reduction in unit testing cycle time for Amazon Developers. Also provided on-call support for the Datapath platform for 6 months, resolving 20+ Sev-2 tickets and 100+ Sev-3 tickets related to product stability using Shell Scripting and Log Monitoring searching through 20GB+ of data.

Tata Consultancy Services | Development Intern(AI Engineer) | Pune, India

Dec 2019 - March 2020

- Automated Service request resolution for infra resource augmentation for demanding workloads reducing the rate of failure by 50%.
- Automated ticket analysis to determine the scope of augmenting and triggering the infra-addition using Python, Ansible and vSphere APIs, leading to reduction in the resolution time from 30 minutes to a couple of minutes.

EDUCATION

Master of Science, Computer Science and Engineering, Santa Clara University

March 2022

Bachelor of Engineering, Computer Engineering, Pune Institute of Computer Technology

June 2020

- Activities and societies: Member of Institute of Electrical and Electronics Engineers (IEEE).
- Development Volunteer for the PICT IEEE Student Branch (PISB)'s technical event, 'Credenz'.
- Designed the web pages for the competitive coding events, 'Clash' and 'Reverse Coding'.

PROJECT WORK

Multi-Class Multi-Movement Vehicle Counting Using IoT devices (AI City Challenge) Feb 2021 - Oct 2021

Worked with a professor for reviewing and optimizing the codes of different teams from the AI City Challenge

- Created an online vehicle counting algorithm and tuned its parameters using Computer vision libraries, YOLOv5 Framework for object Detection and Tensorflow, and Pytorch libraries for training the models, reducing the time taken to run the program by 80% while keeping the accuracy intact.
- Reviewed the project outcomes of 5 teams to work on figuring out the most efficient solution with respect to time and accuracy.

Helmet Detection from Real-Time Surveillance Cameras

Jul 2019 - Jul 2020

Undergraduate Final Project, detected helmets worn by motorcyclists and if helmet not detected, track their license plate

- Developed a custom object detection model using YOLOv3 framework in Python to determine whether a bike rider is wearing a helmet or not; the model was trained using a dataset of over 10,000 images specifically curated for this purpose.
- Utilized Convolutional Neural Networks (CNN) and YOLOv3 to analyze frames extracted from CCTV footage and accurately detect helmets. The model achieved a testing accuracy of 71.76% through manual testing.

Recipe Prediction

Dec 2020 - Feb 2021

Utilized the NLTK library to complete this project as part of my Deep Learning course

- Applied K-Nearest Neighbors Classifier on textual data containing the description and ingredients of a food item to classify it accurately. The model achieved an F1 score of 88.17% on the testing dataset.
- Performed text preprocessing techniques on the input data, including data cleaning and feature extraction, using Python libraries such as Pandas and Matplotlib for analysis and visualization. The obtained diagrams and visualizations helped to achieve an F1 score of 88.17% on the classification task.

Certifications

Udemy – Machine Learning A-Z: Hands-On Python & R in Data Science – Udemy (2019), Complete Python Bootcamp: Go from zero to hero in Python 3 - Udemy (2019), Python for Computer Vision with OpenCV and Deep Learning - Udemy (2020).

Coursera – Neural Networks and Deep Learning – Coursera (2019), AI for Everyone - Coursera (2020).

HackerRank – Problem Solving (Intermediate), Python (Basic), Problem Solving (Basic).