Jay Janodia

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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 Intermediate: Bootstrap, JavaScript, TypeScript, Jest Basic: NodeJS

WORK EXPERIENCE

Amazon | Software Development Engineer 1 | Sunnyvale, CA May 2022 - March 2023

- Enhanced the Datapath product for Amazon Developers using HTML, CSS, React, Java, JavaScript and TypeScript which led to improved customer experience and product stability for approximately 100,000 users.
- Contributed to the customer 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 for internal customers (Amazon Developers) to test their TypeScript code, substantially reducing the unit testing cycle time by 500%.
- 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

- 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.

Peptide Classification Feb 2021 - Mar 2021

This project was completed as part of my Machine Learning course, in which I competed against 30 other students and achieved a 4th place ranking.

- Employed various machine learning algorithms, such as K-Nearest Neighbors Classifier, Multi-Layer Perceptron, Support Vector Machine, Decision Tree, Naïve Bayes, Adaboost, and XGBoost, to classify a given sequence of protein data as antibiofilm or not. The achieved MCC score of 89.76% validated the effectiveness of the applied algorithms.

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).