Jay Mehta

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EDUCATION

University of California,Santa Cruz, USA   **2022** – **2024**

Master of Science in Computer Science [**Courses** - Analysis of Algorithms, Distributed Sys, Adv ML, AI, Networks]   [GPA – 3.4]

Mumbai University, India   **July 2018** – **June 2022**

Bachelor of Engineering in Information Technology with Distinction   [CGPA 9.0/10]

PROFESSIONAL EXPERIENCE

University of California Santa Cruz | *Teaching Assistant* **|** 09/2022 – present
- Led Python programming classes (>300 students) from basic to advanced concepts. Taught Analysis & Algorithms (time complexity, divide & conquer, dynamic programming, graph algorithms). Facilitated optimal learning through weekly sections & logistics management.

Saint Louis University | *Data Visualization Intern* **|** 10/2021 – 11/2021
- Cleaned and processed large datasets to optimize ad-campaign targeting and content, implemented targeting strategies that increased ad-campaign engagement by 25%.
- Created visualizations and presentations to effectively communicate data insights to stakeholders.

Grroom Machine Learning | *Machine Learning Intern* **|** 07/2021 – 09/2021
- Improved upon the entire ML pipeline by annotating image dataset, training and testing models and dealing with outliers. My models helped achieved accuracies around 86% to accurately detect outfits and suggest fashion trends based on an unsupervised learning.

LetsAlign Ltd. | *Software Development Intern* **|** 11/2020 – 05/2021
- Developed and Integrated Intelligent Chatbots and deployed it on websites like Facebook and Whatsapp, using the Jio Haptik platform to assist several businesses and improving latencies for user queries and distributing workloads.
- Worked as a full-stack web developer to fix bugs, setup new pages, improve styling and manage various online businesses. Strategic implementation of changes resulted in a significant boost to incoming traffic, driving overall improvements exceeding 1.2L Rupees.

PROJECTS

ASL (American Sign Language) Tutor
- Developed various Deep Learning models to recognize gestures in the American Sign Language and output a confidence score based on the input stream. Incorporated the models into a mobile application for ease of use and showed better accuracy (average precision 96%) than traditional Yolo architectures.
- Authored and published a paper on the same - IEEE; Other Research papers - Other Papers

Autonomous Vehicle Detection
- My MS Capstone Project, where I worked with Waymo and Wise, to build an efficient model using Transformers and CNNs to detect vehicles and report in real time. Deployed a highly accurate model after thorough testing and made use of several deep learning techniques to provide an optimized solution.

Full Stack Web Project
- Developed a single-page application using Node.js for the back-end, including secure login with MongoDB authentication and integrated Google Login using Passport.js.
- Created a reactive dashboard with React.js, utilizing Material UI packages for interactive graphs, calendars, and a responsive navigation menu.

Scheduling using Ant Colony Optimization
- Built a scheduler using the Ant Colony Optimization algorithm, that managed containers in a cloud environment based on custom heuristics like CPU usage, Memory usage and Fail rate for each process. The approached mimicked the behavior of ants to find a best path and showed 11% better resource allocation compared to state-of-the-art single-objective schedulers.

TECHNICAL SKILLS
- **Programming Languages**: Python, C, C++, HTML5, CSS, JavaScript, MySQL, JSON, PHP.
- **Machine Learning tools**: Scikit-Learn, TensorFlow, Keras, PyTorch, Pandas, Numpy, LabelImg.
- **Mobile and Web Development**: Flutter, Dart and Java; backend, NodeJS, responsive designing, testing and hosting, Rest APIs.
- **Software/Tools**: AutoCAD, MATLAB, Wireshark, Android Studio, Tableau, MogoDB, Git, WordPress, MyShopify, UNIX, SCRUM.
- **Cloud Technologies**: AWS, Docker, Jupyter Notebooks, Google Colab, Azure, Kubernetes.

EXTRA CURRICULAR ACTIVITIES
- Interned at The Art of Living in association with IAHV on a Watershed Management program to aid and improve the water retention strategy in Maharashtra, India, using several software. Certificates - Link;