Harshil Jhaveri

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EDUCATION

University of Southern California   **August 2021–May 2023**
Master's in Computer Science

Dwarkadas J. Sanghvi College of Engineering, University of Mumbai   **August 2017–June 2021**
Bachelor of Engineering, Computer Engineering, CGPA (9.67/10)

EXPERIENCE

FINOVATE CAPITAL, MUMBAI, INDIA | Software Development Intern   **April 2021-July 2021**
- Introduced AI based generation of invoices, and transfers to and from FTP servers. Reduced manpower required by 300%, and increased auditing accuracy twofold.
- Led E2E backend and frontend stack development of an interactive web app used by MSME's for supply chain financing.

CMS COMPUTERS INDIA, MUMBAI, INDIA | Data Science Intern   **December 2019–January 2020**
- Pioneered a Vision-based traffic control system, detecting and estimating vehicle speed from live feed transitioning from traditional ultrasonic sensors. It also characterized automobile's coordinates and type at the time of offence.
- Executed automatic red signal violation detection and penalty generation with 87% accuracy trained on a YOLO model.
- Created a desktop app for network admins, showing a hash-based authenticated live stream of traffic in a clean UI.

ATOM TECHNOLOGIES INDIA, MUMBAI, INDIA | Software Development Intern   **June 2019-July 2019**
- Developed a full stack E-Commerce platform to offer purchase and online sale of payment models to 150,000+ vendors
- Devised a multithreading system for transactions from the same user ID on the existing payment gateway. This facilitated multiple simultaneous payments from the same user and significantly reducing delay.

ACADEMIC PROJECTS

Patient Holistic Care Portal   (*Made using PyTorch, Django, Angular, VanillaJS, SIP.js and Docker)*
- Built a smart recommender for patients based on symptoms, with WebRTC based video consultations with doctors.
- Provides a chatbot to offer support and preserve patient's mental health. Supported by an interactive dashboard to store patient history, allergies and previous medication records.

Smart Disaster Rescue and Mitigation System   (*Made using TensorFlow, NodeJS, ExpressJS and MongoDB)*
- Disaster Management Platform, with dedicated real-time chatroom for updates, offline SOS triggering, safest route computation to nearest police station, and toll payment through app.
- Available as a web and mobile app, also containing a dedicated API for future development use

RESEARCH EXPERIENCE

1. Autoencoder Embedding, Segmentation and Classification of Apparel Images

*In Proceedings of the 4th ICECA, November 2020 - **IEEE Xplore***

Structured applications of visual search, layering, separation of regions of interest from background, synthetic generation, and categorization of apparel in over 800,000 consumer-sourced images.

2. Application of BAT Algorithm for Detecting Malignant Brain Tumors

Applications of Bat Algorithm and its Variants, Springer Tracts in Nature-Inspired Computing Journal

Segregation and detection of tumor type based on weighted brain images. Used a fusion of BAT and Interval Type 2 Fuzzy C Means Algorithms, achieving a similarity of 96.39%.

SKILLS

- **Languages and Operating Systems:** Python, Java, C, JavaScript, Bash, R, Linux, MacOS, Windows
- **Web Development**: Git, Django, Flask, Spring, PHP, React, Angular, MySQL, MongoDB, Docker
- **Libraries and Frameworks:** OpenCV, TensorFlow, PyTorch, Keras, Theano, AWS S3 and Lambda

LEADERSHIP & INVOLVEMENT

- **ACM Student Chapter at DJSCE:** Vice-Chairperson, Technical Head, leading a team of 35 sophomores.
- **Smart India Hackathon:** Shortlisted as a finalist team by the Government of India out of 500,000 national participants
- **Shrimad Rajchandra Love and Care:** Built and maintained main website, created visual dashboards to raise and track funds of over $30 million for Covid-19, created a portal to assess and store data about volunteering efforts worldwide