EDUCATION

University of Southern California Jan 2023 - Dec 2024
Master of Science in Computer Science - Analysis of Algorithms, Database Systems, Machine Learning for Data Science, Language Models in NLP, Innovation for Defense Applications **3.75/4.0**

Institute of Computer Technology 2017 - 2021
Bachelor of Engineering in Information Technology **9.24/10.0**

SKILLS

- **Programming Languages:** Python, JavaScript, C++
- **Web Development:** Django, React, Node.js, Express.js, HTML, CSS, Bootstrap
- **Tools & Technologies**: Git, MongoDB, Elasticsearch, Unit-Testing, Jira (agile methodology)

PROFESSIONAL EXPERIENCE

Datametica - *Software Developer Intern* **Pune, India** | May 2023 – August 2023

- **Synthetic Data Generator -** Orchestrated design and implementation of modular, scalable Synthetic Data Generator. Ensured robust referential integrity for interconnected tables, ensuring data accuracy and consistency. Achieved rapid generation of synthetic data for 6,000+ client DDL files in <10 minutes. Integrated versatile external configuration options for specifying target databases. Adapted data generation strategies based on user-defined infotypes for table columns. Conducted thorough unit testing to ensure data quality and reliability. Demonstrated expertise in **Python, Object-Oriented Programming, Git and Agile methodologies.**

Dozee - *Full Stack Developer* **Bangalore, India** | May 2021 – Nov 2022

- **Continuous Quality Analysis**: Designed, deployed, and managed a Django server to assess algorithm-generated vital values from patient-uploaded .doz files. Scheduled and executed comparisons with ground truth values, generating detailed reports.
- **Patient Vitals Smart Alerts**: Developed and deployed a NodeJS server to provide real-time patient vitals alerts to medical staff, handling ~200 concurrent requests.
- **Dozee Impact Report**: Architected and implemented the frontend, middleware, and database interactions for quantifying facility upgrades' impact using Dozee. Established a systematic data insertion process via cron job, enabling on-demand report generation.
- **Quality Analysis Internal Dashboard**: Collaborated on creating an internal tool for visualizing test results from over 3000 tests across 200 APIs within a 24-hour window.
- **Manufacturer's Dashboard**: Engineered an Electron desktop application facilitating device configuration, including hardware communication and cloud-based log file management. Leveraged Elasticsearch for metadata analysis.
- **Daily Remote Monitoring Reports**: Optimized PDF report generation from 45 seconds to 5 seconds, significantly enhancing efficiency. Managed a service producing ~6000 daily ward reports for hospitals.
- **Interviewer**: Conducted ~30 interviews to recruit junior full stack developer positions.

PROJECTS

Computer Vision Aided Tennis Coaching , *B.E. - Final year project* January 2021

- Created a mobile/web application employing 3D pose estimation and computer vision to assess user posture and movements, offering targeted feedback for technique enhancement.
- Engineered a robust posture and stroke comparison module. Employed dynamic time warping to synchronize and normalize frames from user-recorded and ideal videos, enabling precise feedback for improvement.
- Tech Stack: TensorFlow for advanced machine learning, OpenCV for computer vision, Canvas for interactive visualization, and ReactJS for seamless user interface.

Hospital Bed Tracker for COVID-19 patients, *iLink Web Hackathon* June 2020

- Developed an online portal to dynamically display real-time availability of COVID-19 and non-COVID-19 beds in nearby hospitals and quarantine centers, addressing critical healthcare needs during the pandemic. Additionally, integrated functionality for users to book COVID-19 tests at affiliated laboratories with a referral system.
- Technology Stack: Leveraged NodeJS for server-side operations, ReactJS for responsive frontend design, and ExpressJS for streamlined API management. Employed MySQL for robust data storage and retrieval.

Simulation of an Air Traffic Controller, *COEP MindSpark'19 Hackathon* September 2019

- Design & Development: Created a distributed Air Traffic Controller simulation using Python, Flask, JavaScript, HTML, CSS, and Canvas.
- Multithreaded Runway Algorithm: Designed an efficient multithreading algorithm for runway selection, optimizing take-offs, landings, and emergencies.
- Emergency Intercommunication: Implemented real-time intercommunication for ATCs during emergency landings.

EXTRA-CURRICULAR ACTIVITIES

- Grader at USC for Undergraduate Computer Science Course - Software Engineering
- COEP MindSpark'19 Hackathon **Winner**
- Organized a basketball tournament as a fundraiser - over 30 teams participated and a revenue of INR 15,000 was generated.
- Completed two levels of **Chinese Proficiency Tests**