

AYUSH RANJAN

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Experience

University of California, Santa Cruz

Jan 2024 – Present

Teaching Assistant for CSE-115A Introduction to Software Engineering

Santa Cruz, CA

- Mentored five software engineering groups, nurturing an environment of agile methodologies and collaborative project design.

Capgemini Technology Services India Limited

Oct 2022 – Aug 2023

Associate Consultant

Mumbai, India

- Role:** Java Developer **Client:** Mercedes-Benz Research and Development India
- Designed, implemented, and maintained Java features, employing design patterns while performing code reviews.
- Implemented an innovative approach alongside the existing process, a micro frontend architecture, which streamlined a complex procedure. This allowed users to make specific changes independently while retaining the old process. This change dramatically enhances efficiency and user experience. Earned **3rd place** among 60 competing groups at **Innocircle 2022, Mercedes' Internal Innovation forum.**
- Restructured Expoprt test cases via XML file import strategy and sorting, cutting export testing time by **40 percent.**

Capgemini Technology Services India Limited

July 2021 – Sep 2022

Senior Analyst / Senior Software Engineer

Mumbai, India

- Role:** Java Developer **Client:** Mercedes-Benz Research and Development India
- Conducted software analysis, programming, testing, and debugging. Wrote well-designed, efficient and testable code.
- Collaborated closely with the data model change team to enhance the functionality and adaptability of XDIS (Cross-platform Data Information System), a critical tool for vehicle diagnostics and automatic driving scenarios
- Dramatically optimized XML file migration time by an impressive **66.67 percentage.** Additionally, enhanced the tool's robustness by concurrently implementing indexing strategies for associated IBM Db2 database tables.

Capgemini Technology Services India Limited

Jan 2021 – May 2021

Senior Analyst Intern / Senior Software Engineer Intern **Role:** Java Full Stack Developer

Pune, India

- Led a team of 6 interns** in developing a Medical Portal using Spring Boot for the backend and React for the frontend. Seamlessly integrated frontend and backend via **Axios**. Utilized **JUnit** for backend and **Jasmine** for frontend testing.
- Implemented distinct user roles (Admin, Doctor, Patient) to streamline appointment booking, doctor profile viewing, and medical history management for patients, while enabling doctors to review histories and prescribe treatments.

Education

University of California, Santa Cruz - Master of Science in Computer Science -CGPA : 3.65/4

Sep 2023 – Present

Manipal University, Jaipur - BTech in Information Technology -CGPA : 8.03/10

July 2017 – May 2021

Technical Skills

Programming Languages and Frameworks: JAVA, Python, SQL, C, PyTorch, Spring Boot, Flask, JUnit, JDBC, React, Javascript, HTML, Hibernate, Pytorch, Keras, MySQL, PostgreSQL, DB2, MongoDB, Pandas, Numpy

Software Development Tools: Github, Docker, Kubernetes, Log4j, Jenkins, Papyrus, Jira, Azure, Eclipse, VsCode, Vim

Selected Coursework: Advanced Data Structure, Analysis of Algorithms, Design and Implementation of Database Systems, Advanced Machine Learning Techniques, Operating System, Applied ML: Deep Learning, Advanced Computer Network

Selected Projects

Video to Mp3 Converter | *Flask, Docker, Kubernetes, RabbitMQ, MongoDB* [Github](#)

Dec 2023

- Developed a microservices-based system with four services, including an authentication gateway, authorization service, video upload service, and converter service. The gateway authenticates users via an authorization service, generating JWT tokens for valid users, enabling secure video uploads. Video-to-MP3 conversion was facilitated using the Python library "moviepy".
- Employed asynchronous communication using **RabbitMQ** queue, Utilized **Docker** for containerization, **Kubernetes** for orchestration, and **Minikube** for local development, ensuring consistent and scalable deployment across environments.

Sentiment Analysis using CNN | *Pytorch, TorchText, Jupyter Notebook* [Github](#)

Jan 2020 – May 2020

- Implemented four convolutional layers (filter sizes 2-5) to capture diverse n-grams in text for sentiment analysis.
- Our final model provided us with a **test accuracy** (in percentage) of **87**, **validation accuracy** of **89**, and **training accuracy** of **88**, and this project earned me **A+ grade in my Minor Project.**

Facial Attendance System | *OpenCV, Python, Tkinter, gTTS, Playsound* [Github](#)

Aug 2019 - Nov 2019

- Developed a facial attendance system employing advanced recognition to log known individuals' attendance with date and time, while also facilitating historical retrieval using names.
- Elevated user interaction by integrating Google Text-to-Speech technology to deliver personalized welcome messages to recognized individuals.

Certifications

AZ-900 Certification (2022): Secured 940/1000.

Introduction to Compiler Certification (2019): Course focused on compiler construction and design.

SQL Fundamentals by SoloLearn (2019): Course on SQL scripting.