

Jainil Rana

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EDUCATION

University of Ottawa

Masters of Engineering in Computer Engineering and specialization in AI

Ottawa, ON

Sep. 2023 – May 2025

Charusat University

Bachelor's in Computer Engineering

Anand, Gujarat

May. 2019 – May 2023

EXPERIENCE

Software Developer (Full-Time + Intern)

AAROGRAM INC.

North Carolina, United States

January 2023– August 2023

- Devised a frontend system to streamline patient prior authorization, improving customer interaction and thereby **increasing users by 22%**, achieved HIPAA-compliance, seamless data integration using EHR and FHIR APIs.
- I secured immediate client approval for RPA implementation on the Availity portal, achieving a **40%** improvement in efficiency, and successfully automated data extraction from the Cigna Healthcare portal.
- Engineered and optimized a cutting-edge RPA-PFR pipeline, streamlining task execution and **reduced the processing time to half** resulting in annual savings of roughly 500+ man-hours.
- Database Administration:** Learnt basics of database administration

Software Developer Intern

IIT Madras

Chennai, India

July 2022 – December 2022

- Took the lead in making the backend development for a BSc Degree Programme website, with a specific focus on Python-based solutions.
- As part of this role, I devised and executed Automation Scripts to optimize and streamline report generation processes, resulting in a substantial improvement in efficiency.
- Orchestrated real-time course outline extraction, transforming data into CSV format for seamless Result Evaluation Report generation.

Machine Learning Intern

ONGC

Vadodara, India

May 2022 – June 2022

- Learnt and performed ML for well-logging in geologic formations penetrated by a borehole.
- Enhanced data interpretation with ML models.
- Executed a comprehensive machine learning project for analyzing borehole data in geologic formations; improved identification of hydrocarbon **reserves by 2.5 %**. Also conducted assessments for adaptive models.

Software Developer Intern

Sannibh Technologies

Vadodara, India

Jan 2022 – May 2022

- During my internship at Sannibh Technologies, I worked as a software developer intern where I focused on an e-commerce app
- I actively contributed to the development and enhancement of key features, gaining practical experience in building and optimizing an e-commerce platform.

PROJECTS

Prior Auth Predictor | *Machine Learning, Time Series Analysis*

Oct 2023 – Present

- Implemented various classifiers to predict the likelihood of Prior Authorization (PA) approval in the pharmacy claims process with a **topmost accuracy of 75%**.
- Utilized a random forest model, identified through feature importance and ROC AUC score.
- Applied additive exponential smoothing for PA volume forecasting, identified payer formularies, demonstrating prescription process expertise.

Text Summarization | *Python, Attention Mechanism, NLP, Transformers*

June 2022 – Sep 2022

- Developed a Text Summarization system using Natural Language Processing (NLP) techniques, achieving a **25%** reduction in document length while retaining key information.

- Conducted research specifically for the Gujarati language, addressing linguistic nuances and challenges, resulting in an **improved accuracy rate of 15%** in Gujarati text summarization.
- Emphasized customization, real-time processing, and scalability as critical factors in optimizing the text summarization process, leading to a **30%** increase in processing speed.

Spendee | *Android Studios, Java, SDKs, Git*

Jan 2020 – June 2020

- Leveraged Android Studio, Java, and Kotlin to build and optimize the Spendee expense tracker app, implementing robust user interfaces and ensuring seamless functionality.
- Integrated third-party APIs for features like currency conversion and receipt scanning.

TECHNICAL SKILLS

Languages: C/C++, Python, Java, SQL (Postgres), JavaScript, HTML/CSS, R

Frameworks: React, Node.js, Flask, WordPress, Material-UI, FastAPI, Git, Docker, Linux command line, Containers

Developer Tools: Postman/Thunder Client, AWS Cloud Platform, VS Code, PyCharm, IntelliJ, Fusion 360, Eclipse

Libraries: Tensorflow, Pandas, NumPy, Matplotlib

Methodologies: Agile, Optimisation, Dynamic Programming, Distributed Storage, Cache mechanism, CI/CD Pipelines