

Rohit Prakash Chavan

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Education

Sanjivani College of Engineering, Kopergaon

B. Tech in Computer Science and Engineering (Honors in AI/ML)

Dec 2021 - Present

CGPA: 8.30/10

Skills

Languages & Database: Java, Python, PostgreSQL, MongoDB

Frameworks & Libraries: FastAPI, React.js, Node.js, Express.js, PySpark

Cloud & DevOps : AWS (EC2, S3, RDS, Lambda), Azure DevOps

Data Science / Machine Learning : EDA, Data Preprocessing, Data Visualization, Feature Engineering, Supervised and Unsupervised Learning, ANN, CNN and RNN.

Work Experience

RSquareSoft Technologies, Pune

Jan 2025 - Present

Associate Software Intern

- Developed and maintained high-performance REST APIs using **FastAPI** and **PostgreSQL**, enabling scalable backend services.
- Improved API response time by **~35%** using asynchronous programming and query optimization techniques.
- Refactored complex database queries, reducing latency and significantly enhancing data retrieval efficiency.
- Integrated **PySpark** and **AI modules** into backend workflows, automating data pipelines and boosting decision-making accuracy.

Project Work

Context-Aware Smart Search Engine [GitHubRepository](#)

Technologies : FastAPI, Python, PostgreSQL, React.js, FAISS, Sentence Transformers, BERT QA, Web Scraping

- Developed a full-stack **smart search engine** using **FastAPI** and **React.js** that combines **semantic search** and **question-answering models** for document-based query retrieval.
- Integrated **FAISS vector search** with **async processing** to optimize API performance, achieving query response times under **1 second** while processing local and web-scraped data from **3+ sources**.
- Applied **MiniLM Sentence Transformer** and **BERT QA models** to enhance semantic accuracy, and built an interactive React.js interface for real-time search with seamless backend integration.

AI-Enabled Loan Origination & Biometric Authentication System [GitHubRepository](#)

Technologies: Node.js, Express.js, React.js, MongoDB, Python (FastAPI), Scikit-learn, Cosine Similarity

- Developed a full-stack loan origination platform with **Node.js**, **React.js**, and **MongoDB** to manage application intake, loan eligibility calculation based on income and credit score, and automated approval or rejection workflows.
- Integrated an **AI-powered behavioral biometric authentication system** using **keystroke dynamics and cosine similarity** to verify users based on **unique typing patterns** for secure login and access control.
- Built seamless API communication across React.js frontend, Node.js backend, and Python-based AI microservice for real-time loan processing, authentication, and secure data management.

Diabetes Prediction System using Machine Learning [GitHubRepository](#)

Technologies: Python, Pandas, NumPy, Scikit-learn, Seaborn, Machine Learning

- Developed a predictive analytics system using the Pima Indian Diabetes Dataset, combining advanced machine learning techniques such as Gradient Boosting and Logistic Regression, and achieved over 90% accuracy in diabetes prediction.
- Built a complete ML pipeline with data cleaning, feature scaling, hyperparameter tuning, and EDA using Seaborn and Matplotlib to uncover key health risk patterns and improve model performance.

Certificates & Training

- **Complete Machine Learning, NLP Bootcamp MLOPS & Deployment - Udemy**
- **DSA With Java - Apna College** [Link](#)
- **Data Science Training with industrial Expert.**

Achievements

- Solved 300+ coding problems on platforms like LeetCode, Codechef in Java.