

SARTHAK AGASE

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EXPERIENCE

Raja Software Labs, Pune

Software Engineer

May 2025 – Current

- Worked on a **full-stack web application** having **Next.js**, **gRPC**, **Ably**, **GraphQL**, with comprehensive **unit and E2E testing** via **Jest** and **Cypress**.
- **Redesigned navigation architecture** in **Next.js**, cutting **initial load time by 50%** and improving **FCP from 6s to under 2s**, significantly enhancing user experience.
- **Optimized backend performance** by tuning **Snowflake connection pooling** and session management, preventing token expiry and improving system reliability.

Software Development Intern

July 2024 – May 2025

- Completed training in **JavaScript**, **React**, and **React Native**. Contributed to a **shared UI component library** and implemented a **generic filtering system**.
- Developed **dynamic, reusable data visualization components** using **Visx** and **Chakra UI**.

ACHIEVEMENTS

Research Paper Published in IEEE ICCUBE 2024

🔗 View Publication

Paper Title: "Voice Auth: Audio Verification with Deep-Learning"

- Developed deep learning models to detect real vs. deepfake audio using **Mel-Frequency Spectrograms** and a custom **CNN**, achieving **96.48%** accuracy on the **ASVspoof 2019 dataset**.
- Extracted **MFCC and other audio features** with **Librosa** and applied **ensemble classifiers** (MLP, Random Forest, XGBoost), reaching **98.72% accuracy**.

EDUCATION

Vishwakarma Institute of Information Technology

Bachelor of Technology in Information Technology | CGPA: 8.92

Pune, Maharashtra

Dec. 2021 – May 2025

Rajarshi Shahu Junior Science College

HSC Board | Percentage: 96%

Latur, Maharashtra

Jun. 2019 – Feb. 2021

SKILLS

Programming Languages: JavaScript, TypeScript, Python, SQL

Web Development: Next.js, React, React Native, Node.js, Express.js, Django, HTML5, CSS3

JS Libraries: TanStack Query, React Hook Form, Zod, Jotai Atom, Chakra UI

Databases & Backend: gRPC, Snowflake, GraphQL, SQLite3, MySQL, AWS

Testing & Tools: Cypress, Jest, Git, GitHub, Jira, Postman

PROJECTS

IntelliCart | ReactJs, FastAPI, Python, JavaScript

🔗 GitHub

- Developed an intelligent market-basket optimization web app using implementing **Apriori**, **Eclat**, and **FP-Growth** algorithms for product recommendations and deploying it on **AWS EC2**.

Quiz Application | Django, SQLite3, JavaScript, Python

🔗 GitHub

- Developed a **Django** based quiz application with an admin dashboard, **SQLite3** storage, interactive UI, and data visualization using **Matplotlib**.

Plant Disease Prediction | Python, Streamlit

🔗 GitHub

- Developed a high-accuracy crop disease prediction model using custom **CNN** and **VGG16** (transfer learning) on the **PlantVillage** dataset, achieving up to **99.5%** accuracy across multiple crops.