

PROFILE SUMMARY

Software Engineer with strong CS fundamentals and hands-on experience in scalable, cloud-native infrastructure and AI-driven applications. Built and deployed full-stack platforms— [Uni-Papers](#) (live), [AeroStream](#) (AI healthtech), and [Aarogya](#) (rural health infra)—across healthtech and edtech. Skilled in distributed systems, mobile development, and cloud technologies. Currently deepening expertise in TensorFlow, PyTorch, and production-grade ML. Focused on large-scale system design and NLP to drive impact from diagnostics to academic knowledge sharing.

EDUCATION

B.Tech Computer Science and Engineering

[Expected, May 2026]

Vellore Institute of Technology, Vellore

- CGPA - 7.96 / 10

Experience

Aarogya – Rural Health Data Platform (Pre-Launch)

Software Engineer | Sukhipur-10, Siraha, Nepal

[Sep 2023 – Jan 2025]

- Engineered a health data collection mobile application utilizing Expo (React Native) for a rural **health startup**, directly serving **underserved communities across Nepal, increasing data collection efficiency by 60%**.
- Designed a **zero-infrastructure backend using Google Sheets API + Drive** (15GB free tier), enabling secure patient data storage **at zero cost — ideal for rural-scale deployments**.
- Collaborated with the founding team on **business modeling, pricing strategy**, and operational workflows for bi-monthly data collection, free emergency ambulance, and monthly remote consultations.
- Managed logistics planning** for health worker visits, patient outreach activities, and local office operations to ensure efficient healthcare service delivery.
- Currently preparing for pilot deployment, with plans **to serve 1,000+ local residents in early stages**.

Projects

Uni-Papers.com – AI-powered Academic Sharing Platform

[[Link](#) | [Code](#)]

- Launched a full-stack academic platform using **Next.js + Supabase**, enabling students to share and earn from 100+ past papers across **100+ universities**.
- Integrated **Google Ads** with a scalable **55% revenue-sharing model** for contributors and **referral-based growth** (1% incentive per university onboarded).
- Implemented **AI Q&A assistant** per paper using **Gemini embeddings + serverless functions**, increasing average session time by **~40%**.
- Built fully open-source with a growing GitHub community, currently managing **300+ monthly active users** and feature contributions.

AeroStream – **LLM-powered Disease Detection via Breath Analysis** (Ongoing)

[[Code](#)]

- Developing a robust healthtech application utilizing React Native for seamless user experience and Python for backend functionality; result in a streamline **disease detection** process that **reduced analysis time by 40% for healthcare providers**.
- Orchestrated secure role-based workflows within the healthtech platform, granting tiered access to patient records for 200+ hospital staff and ensuring **full compliance with HIPAA security standards**.
- Integrated ML pipeline to preprocess sensor data from the AeroStream device and reduce false positives by **28%** in initial tests.
- Deployed and **maintained machine learning models on cloud infrastructure**, ensuring high availability and scalability; resolved 3 critical issues, boosting system reliability.

Text-Aware Image Processor – **70% Cost-Reduction OCR Pipeline**

[[Code](#)]

- Developed a custom OCR pipeline that uses a **text region detector (YOLOv8)** to crop images **before OCR**, reducing cloud compute usage by **~70% per image**.
- Built using **Python, Tesseract, and OpenCV**, optimized for AWS Lambda functions to process **1000+ images/day** under strict latency constraints (<500ms).
- Designed for future deployment in document **processing SaaS platforms and EdTech automation workflows**.

SKILLS

- Programming Languages:** Python, Java, C, C++, JavaScript, TypeScript
- Cloud & DevOps:** AWS (Lambda, EC2, S3, DynamoDB, API Gateway, IAM, CloudFormation, WebSockets), Google Cloud (Practicing), Microsoft Azure (Practicing)
- Web Development:** Next.js, React.js, Node.js, HTML, CSS, Javascript — Proficient in scalable full-stack development with TypeScript | **Mobile Development:** React Native (Expo), Tailwind CSS, Shadcn.
- Deep Learning & Data:** NumPy, Pandas, Matplotlib; currently learning TensorFlow & PyTorch, applying to real-world projects
- Competitive Programming:** Solved 200+ algorithmic challenges on LeetCode, Codeforces, and NeetCode, showcasing expertise in data structures, algorithm design, and optimizing solutions under time and space constraints
- Systems:** Distributed Systems (built on AWS/GCP), TCP/IP fundamentals, Linux/Unix environments (daily CLI + server-side development)
- Tools & Platforms:** Git, GitHub Actions, Supabase, Google Sheets API, Postman, Vercel, Cloudflare.