

# Vishal Dhanasekaran

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## Education

Coimbatore Institute of Technology

October 2022 – Present

M.Sc., Software Systems (Integrated) | CGPA: 8.28 (till 7th Semester)

Geethanjalee Matric Hr Secondary School

May 2022

HSC | Percentage: 85.3%

## Professional Experience

Software Development Engineer, Asthra Medtech Pvt Lmt

June 2025

Coimbatore, On-Site

– November 2025

Ultrasound Scan Report Generating Software ↗

Tech Stack: Next.js, Express.js, Postman

- Developed a web-based platform that allows doctors to upload **DICOM medical scans** and automatically generate structured reports using OCR.
- Implemented a report editor with MPIN-secured digital signatures for secure publishing.
- Reduced report preparation time from 60 minutes to 5 minutes, significantly boosting doctors' productivity.

Project Management System ↗

Tech Stack: Next.js, Express.js, MySQL, Docker, AWS RDS, Bruno

- Designed and developed **RESTful APIs with JWT-based** authentication for secure, role-based routing.
- Built features for live task tracking, schedule variance monitoring, and resource allocation, improving efficiency for both developers and project managers.

## Projects

Melinia'26 ↗, | bun | hono | vite + react (typescript)

January 2025 – February 2026

- Architected and deployed a full-stack event management platform using Bun, Hono, React, Vite, and TypeScript in a monorepo architecture.
- Successfully handled **2000+ users** and event registrations during the tech fest.
- Integrated **Redis + BullMQ** for asynchronous job processing, and designed **PostgreSQL** database schemas to support scalable event registrations, payment tracking, and transactional email workflows.
- Implemented production-grade infrastructure with **Docker, Caddy reverse proxy**, GitHub Actions CI/CD, and **Prometheus + Grafana monitoring**, deploying the entire system on a self-managed VPS with a self-hosted **Mailcow SMTP server** for reliable email delivery and system observability.

Chotta Chat ↗, | Next.js | Ollama | Vercel's AI SDK

August 2025

- A lightweight chat application that enables seamless interaction with locally hosted AI models via **Ollama**.
- Features a clean, responsive UI with real-time streaming responses for an intuitive user experience.

FOSStream ↗, | React.js

July 2025

- A single-page application (SPA) that aggregates **FOSS news** from multiple blogging platforms.
- Implements **infinite scrolling** with smooth, efficient data fetching and a responsive interface for uninterrupted browsing.

TickTOS ↗, | RTOS | System Programming | OS Development

December 2024

- A user-space simulation of a preemptive Real-Time Operating System (RTOS) with task scheduling, and real-time elevator control using **priority-based scheduling**.

CHESS GAME ENGINE ↗, | ReactJS | Tailwind CSS

July 2024 – October 2024

- A chess engine, with the score sheet that appends the **algebraic notations automatically**.
- Programmed and integrated a chess engine that generates valid moves using the **MiniMax algorithm**.

## Roles & Responsibilities

Secretary, Department of Software Systems ↗

December 2025 – Present

- Organized **Alumini meetups**, to extend the Alumini association
- Delivered workshops, bootcamps and **mentored juniors** on their placements and personal projects

Core Team Member, FOSS United Coimbatore ↗

June 2025 – Present

- Organized Meetups in promote and build FOSS Ecosystem in **Coimbatore** region.

### Club Advisor, FOSS-CIT ↗

May 2025 – April 2026

- Delivered a Flash task in **IndiaFOSS 2025**, *India's Largest FOSS Conference*.
- Represented the Club in **TOSSConf 2025**, *a state level Open Source Software Conference*

### Secretary, FOSS-CIT ↗

May 2024 – April 2025

- Led the club by coordinating tasks and ensured fairness in teamwork
- Delivered sessions on **GNU/Linux, DSA, and Version Control Systems**.
- Team **Lead & Maintainer** for Open Source Projects of FOSS-CIT

### Public Relations Manager, FOSS-CIT ↗

May 2023 – May 2024

- Collaborated with participants and managed promotional activities of the Club.

## Technical Skills

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**Programming Languages:** C, C++, Python, bash, Java, asm x86, Typescript, Kotlin (basic)

**Tools/Frameworks:** Next.js, React.js, Node.js, Git/Github, Linux, Ollama, Cypress, Docker

**Databases:** MySQL, Supabase (PostgreSQL)

## Co-Curricular

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Introduction to JavaScript Security (LFS184) ↗, The Linux Foundation

November 2025

DIPLOMA in Quantum Computing ↗, QWorld Bronze 2024

October 2024

WINNER in Tech Research Presentation ↗, Computing Research Day'24 - CIT

September 2024

## Interests

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Backend Development | Open Source Software Development | Operating Systems | DSA