Lavanbarath B

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Education

Vellore Institute of Technology **July 2024 - Expected July 2028**

B.Tech Computer Science Engineering with Data Science, 8.62 CGPA *Vellore, TN, India*

Relevant Experience

VinnovateIT **Dec. 2024 - Present**

Projects Head *VIT, Vellore, TN, India*

- Led mobile development for MessIT across Android and iOS, supporting 35k monthly users. Built offline menu caching and handled background push notification delivery.
- Built Latch, a cross-platform client that automates captive portal authentication, maintains session keep-alive requests, and secures authentication tokens in the device keystore.
- Managed deployment and hosting for campus events like VinHack, using Docker containers to keep services available during high registration traffic.
- Configured GitHub Actions workflows to automate builds, run lint checks, and test pull requests before deployment across club repositories.

Projects

AndDirStat | Android Disk Space Visualizer | GitHub

- Built a native Android disk analyzer to scan, index, and visualize storage distribution across internal and external partitions.
- Engineered interactive hierarchical treemap views and used Kotlin coroutines to process disk I/O asynchronously without UI frame drops.
- Implemented recursive directory traversal to compute nested folder sizes, caching scanned metadata to optimize repeated disk reads.

retop | VTOP Portal Revamp | Chrome Web Store

- Built a Manifest V3 extension to replace the legacy university portal layout with a responsive student dashboard with purpose-built page specific views.
- Injected components using Shadow DOM to isolate styles and prevent existing site stylesheets from breaking the new layout.
- Cut dashboard render times from 2.5 seconds to under 1 second by caching timetable and profile data in local storage, removing redundant network calls.

Vazhga Valamudan | Client Web Application | Live Site

- Built and deployed a production web platform using Next.js and Tailwind CSS for 15 Velampalayam Arivuthirukkovil, serving regional schedules and daily publications.
- Integrated Leaflet.js with marker clustering to map and filter 400+ meditation centers across India and overseas.
- Implemented Lenis smooth scrolling, variable font weight transitions, background audio state handling, and automated Vercel deployment workflows.

Technical Skills

Languages: Python, C, C++, Java, JavaScript, TypeScript, Dart, Kotlin, Bash
Frameworks and libraries: Flutter, Node.js, Next.js, Tailwind CSS
Tools and databases: Docker, Git, MongoDB