

HARIKRISHNA MOHAN

CURRICULUM VITAE

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Kollam, Kerala - 691505, India

SUMMARY

Systems programmer and full-stack developer with experience in leading academic and independent projects from architectural design to deployment. Lead developer of VocalLink and an advocate for Linux and open-source software, committed to creating fast, reliable, maintainable and bloat-free software.

EDUCATION

- **College Of Engineering And Management, Punnapra** 2023 - 27
B.Tech in Computer Science and Engineering Alapuzha, India
◦ CGPA: 8.48
- **St Aloysius HSS, kollam** 2020 - 22
Higher Secondary School Education Kollam, India
◦ Grade: 80.09%
- **Little Flower H.S, Thrippilazhikom** March 2020
Secondary School Education Kollam, India
◦ Grade: Full A+

PERSONAL PROJECTS

- **VocalLink: A Distributed Audio Recording & Orchestration System** Jan 2026
Tools: Python, FastAPI, WebSockets, mDNS, Whisper, TypeScript, Android Studio [0x11a41/vocal-link-dashboard](#) [🔗](#)
◦ Designed a custom local-network protocol for unified command orchestration across distributed nodes.
◦ Built a dynamic web UI that maintains persistent WebSocket states during view transitions.
◦ Prototyped high-fidelity Figma dashboards to visualize system metrics and align UI/UX specifications.
◦ Engineered a real-time Android DSP engine to isolate vocal frequencies and suppress background noise.
- **laed: A lightweight tui-based text editor written in C** Sep 2025
Tools: ncurses library for text rendering, git, makefile [0x11a41/laed](#) [🔗](#)
◦ Developed a portable editor engine that can be embedded in any ncurses projects.
◦ Implemented a gap buffer for storing text in memory, achieving O(1) insertion and deletion.
◦ Created an intuitive keybinding system while allowing advanced operations through a command palette.
◦ Made use of debugging tools like ASAN, valgrind and gdb to make the system memory safe and reliable.
- **uni-void: A sliding puzzle game inside the terminal in C** Jul 2024
Tools: git, ncurses, make, a custom arena based memory-allocator [0x11a41/uni-void](#) [🔗](#)
◦ Developed a difficulty and leaderboard system, making the game more challenging.
◦ Implemented an undo-redo system using stacks, allowing the player to rewind a bad move.
◦ Created a simple csv-parser for storing and retrieving leaderboard scores.

TECHNICAL SKILLS

- **Programming Languages:** C, go, python, lua, bash
- **Web Technologies:** html/css, typescript, node.js, FastAPI, WebSockets, React
- **Database Systems:** MySQL, mongodb
- **Tools & Technologies:** git, nix, neovim, tmux, figma, office-tools, gimp, github, gitlab, LLM's
- **Other Skills:** Fluent in using the terminal, LLM prompting

ADDITIONAL INFORMATION

Languages: English, Malayalam

Interests: Programming, Drawing, Reading, Writing, Physics, embedded systems, life science