

Savar Verma

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EDUCATION

Indian Institute of Technology, Madras

Chennai, Tamil Nadu

Bachelor of Technology in Electrical Engineering

Expected 2026

SKILLS

Languages & Concepts: JavaScript, Python, SQL, C++, C, Bash, Computer Networks, OAuth 2.0 / SSO

Cloud & Tech: Node.js, PostgreSQL, DynamoDB, Redis, Docker, React, Linux, Git

WORK EXPERIENCE

Atomberg Intern

Feb 2026 – Present

Cloud & Backend Engineering

Remote

- Architected a production-ready **Node.js Identity Provider (IdP)** to replace **AWS Cognito** infrastructure
- Designed a dual-database architecture using **DynamoDB** and **PostgreSQL** for auth and business analytics
- Engineered secure authentication workflows implementing **OAuth 2.0 Authorization Code** flows and **SSO**
- Integrated the **Secure Remote Password (SRP)** protocol for robust zero-knowledge client authentication
- Built a responsive **React/Vite admin** portal for comprehensive user lifecycle and system access management
- Secured an **internship extension to 6 months** and **PPO consideration** due to critical business impact

PROJECTS

High-Performance Scalable URL Shortener – *Python, React, PostgreSQL* – [[repo](#)] [[live](#)]

Nov 2025

- Achieved **sub-50ms latency** by architecting a **FastAPI** system with **Redis** cache-aside strategies
- Designed a collision-free **Base62** algorithm on **Serverless PostgreSQL** to handle millions of unique records
- Engineered **asynchronous** background tasks to track real-time geo-analytics without blocking user requests
- Built a responsive **React** and **Tailwind** dashboard to visualize live system telemetry and traffic metrics

Multi-Threaded CLI Image Editor – *C++* – [[repo](#)]

Jul 2025

- Designed and developed a command-line **image editor** for Linux in C++ for low-level **pixel manipulation**
- Leveraged C++ multithreading to achieve a **64% performance boost** over sequential execution
- Implemented strict in-memory processing to eliminate **I/O race conditions** during concurrent batch operations

OPEN SOURCE CONTRIBUTIONS

Suckless.org (dwm) Contributor – *C, X11* – [[patch 1](#)] [[patch 2](#)] [[commit](#)]

Jan 2026 – Present

- Contributed 2 upstream patches to **dwm** (**nocornermonocle**, **fullscreen**) to optimize **X11** window logic
- Integrated **EWMH compliance** via X11 Atoms to control external compositor rendering for specific layouts
- Engineered a **state-preserving** fullscreen toggle caching layout history to resolve view switching loops

Automated Linux Development Environment – *Bash, POSIX sh* – [[repo](#)] [[scripts](#)]

Jul 2021 – Present

- Architected a **reproducible** system config with custom bootstrap script for dependency/symlink automation
- Integrated **15+ discrete tools** (Neovim, Zsh) into a unified workflow ensuring **zero-configuration** deployment
- Authored cross-distro installation docs, garnering **100+ stars on GitHub** for modularity and clarity

RELEVANT COURSEWORK

Functional and Logic Programming, Operating Systems and Lab, C Programming, Programming in Python
Probability, Linear Algebra, Detection Theory, Differential Equations, Machine Learning Techniques