Aditya Dutt

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About Me

I'm current working as in Visa, focusing on Unix Authentication.
I am interested in Linux Kernel and low-level systems and I am learning about the kernel, bootloader and the broader system stack with the goal of making meaningful contributions.

Work Experience

Visa Inc.
Associate Engineer Jun 25–Present
Intern May 24 - Aug 24, Jan 25 - Jun 2025

– Developed several Linux-PAM modules for authentication in C.
– Built an internal fork of `sudo` with features for log collection and automated configuration.
Skills: C, Unix Systems Programming, Networking, Shell scripting

Education

2025 B.Tech, Computer Science & Engineering, **Vellore Institute of Technology** (CGPA: 9.28)

Achievements

- **Linux Foundation Mentorship - Linux Kernel Bug Fixing Fall 25**
  Contributed bugfixes in the JFS filesystem in the Linux Kernel upstream
- **Pentathon 2024 Winner** CTF / VAPT exercise conducted by NCIIPC & AICTE (Team of 6)
- **BRICS+ CTF 2024** Among the top 25 teams in the world which qualified for the finals
- **Zonal Informatics Olympiad** Cleared Zonal Informatics Olympiad in the year 2020 and 2021
- **Google Code-In Finalist** Contributed to FOSSASIA projects, among top 150 students out of 3500
- **Competitive Programming** Max rating 1598 on CodeForces and 1811 on CodeChef.

Projects & Open Source

- **Linux Kernel & U-Boot Upstream contributions** (link)
  Contributed bugfixes in the JFS filesystem in the kernel and did several backports for JFS filesystem.
  Contributed a small bugfix in upstream U-Boot for cmd terminal
- **CHIP-8 Virtual Machine in Rust** (link)
  Wrote a Virtual Machine in Rust for CHIP-8 which is a simple 8-bit computer system designed for games.
- **DNS Resolver in C++** (link)
  A DNS resolver written from scratch in C++ (using Boost.ASIO) with manual parsing of packets.
- **Reflections on Trusting Trust Demo** (link)
  A demo of the Ken Thomson attack as described in his Turing Award Acceptance speech.

Skills

Programming Languages	C, C++, Python, x86 Assembly, Go, Haskell, Shell Scripting
Tooling	Bash, Git, Vim, GNU Autotools, Make
Embedded Systems	Familiar with U-Boot, Buildroot, BusyBox

Courses & Certifications

- **Automata Theory** (edX)
- **From Nand to Tetris I** (Coursera)
- **Introduction to Haskell Programming** (NPTEL)
- **Ethical Hacking** (NPTEL)
- **AWS Cloud Practitioner** (AWS Certifications)