

Ayush Dutta

Computer Science , Undergrad

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Work Experience

SkyGad Pvt. Ltd.

Product Security Intern

Aug 2024 - Present

- **Designed and Developed** a platform for an **Ai Chatbot** for **mental health** using **FastAPI**
- **Tested** products for **APIs** and **LLM vulnerabilities** using **Burp-Suite**, performed code reviews and optimised code-base

BITS Pilani Hyderabad Campus

Summer Research intern

Jun 2024 - Present

- Pioneered research on **networking algorithms** for wireless crowd charging of devices in Internet Of Things.
- Led efforts at the generating **benchmarks** for various network algorithms.

Projects

DIALGA: Reverse-engineered Git, with improvements | *Rust, Shell, ViteJS*

[Project Link](#)

- Designed and developed a **Version Control System** from scratch, capable of features like snapshotting, and reverting back commits.
- **Documented and deployed** setup instructions through ViteJS.

BERSH: POSIX compliant shell | *C*

[Project Link](#)

- Created an **configurable** shell.
- Supports **piping** and all other **basic GNU utils**

ROOTBLAST: Shellcode injection malware | *Visual C++,Metasploit framework*

[Project Link](#)

- **Designed and developed** a script with Visual C++ compiler that can **spawn remote shells** in target machines.
- **Evades detection** by **74 anti-malware products** on **VirusTotal**.

KAZAMA: Ollama wrapper package | *Rust,Ollama API*

[Project Link](#)

- **Wrapper Library** that helps in **interacting with Localised LLMs** directly through the Rust language.

CLAXVIM: Lightning fast & full-fledged Neovim distribution | *Lua,Lazy.nvim,Shell*

[Project Link](#)

- Written in Lua, Lazy.nvim and Shell.Built from scratch, has all the features of a modern IDE from syntax autocomplete, to tabs, file-tree, etc.
- **20X Faster startup time** compared to other code editors due to the Neovim base, includes a file fuzzer and inbuilt color-schemes

Berzifetch: Lightweight system fetch | *C*

[Project Link](#)

- **Rewrote** the popular Neofetch program in C which makes it **faster,lighter and performant**.

Technical Skills

Programming Languages

C, C++, Python, Rust, Bash, Javascript,Lua

Frameworks & Libraries

Matplotlib, Shuttle, Actix, FastAPI, Flask, Sci-kit learn, Numpy, Pandas

Databases

MySQL,PostgreSQL, SQLite

Reverse Engineering & Tools

Ghidra, x64/32DBG,REMnux,FlareVM, Burp-Suite, Metasploit, Nmap

Automation and DevOps:

Git,Github,Docker,Github Actions

Programming tools:

Utilizing Linux as the underlying operating system through Neovim & PopOS

Achievements

- **Secured Honorary Mentions in "9 hacks" hackathon**
- **4X Speaker** with 193,165,43 & 214 attendees, **Founder & Mentor** of the **Linux Community** in **Google Developer Student Clubs IIT Chennai** and grew from scratch to a **450+ community** in **4 months**
- **Grew** LinkedIN followers to 1000+ in a matter of **6 months** by **producing content** on cybersecurity and computer science
- Won **SIH 2023** internal hackathon.
- **Cracked** over 20+ binaries through reverse engineering
- **Reported LLM vulnerabilities** for two search engines

Education

SRM University, Andhra Pradesh

Aug 2023 - Aug 2027

B.Tech in Computer Science and Engineering (CyberSecurity Specialisation)