Arjun Singh

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EDUCATION

University of California San Diego

La Jolla, CA

Bachelor of Science in Computer Engineering

Bachelor of Arts in Philosophy

Sep 2024 — June 2028

• Cumulative GPA: 3.950

• Relevant Coursework: Data Structures (Java), Systems Programming (C, ARM), Discrete Math, Linear Algebra, Analog Design

PROJECTS

Author and Maintainer, The Droid Blog (arjdroid.me)

Jun 2020 — Present

- Personal blog with technical posts communicating applications of computing. Topics inlcude: Deploying automated Minecraft servers with Docker, Configuring a NAS on a Raspberry Pi, and running Large Language Models with ollama.
- · Website maintained using templated Hugo static site generation, automated deployment via Github Actions CI/CD pipeline

Maintainer, Outline OCI Terraform (github.com/arjdroid/outline-oci-terraform)

Mar 2024 — Present

- Wrote Terraform code to automate deployment of Outline VPN Servers on Oracle Cloud Infrastructure (OCI)
- Configured cloud networking, including VCN setup, security lists, and firewall rules to ensure secure communication
- Automated SSH keys, cloud routing and security / firewall rules to enhance user privacy and streamline deployment

Lead Developer, greenifyTransit (<u>github.com/arjdroid/greenifyTransit</u>)

Dec 2022 — Jan 2023

- Built a cross-platform transit recommendation app built using Flutter, led team to 2nd place in Oakridge Codefest 2023
- Integrated GCP Distance Matrix, OpenWeather APIs, and decision-tree algorithms for real-time eco-friendly suggestions
- Mentored two junior developers in app development and code collaboration, winning against 25+ teams in the hackathon

EXTRACURRICULAR ACTIVITIES

HAM Radio Operator

Mar 2022 — Present

- Principal Member of UCSD Amateur Radio Club KK6UC, licensed callsign VU3EWS
- · Partaken in contests, built and installed custom antenna setups for VHF and HF, configured SDR software for decoding digital modes

Open Source Contributor

Feb 2021 — Presen

- Contributed to multiple open-source projects, including a successful PR to Homebrew to fix and undeprecate mit-scheme
- · Collaborated with maintainers to optimise package configurations and resolve compatibility issues across macOS versions
 - Participated in code reviews and CI/CD pipeline optimisations, ensuring build stability and cross-platform support

Core Team, Oakridge Codefest 2024

Dec 2023 — Mar 2024

- Organised one of India's largest highschool hackathons, overseeing 30+ volunteers and coordinating logistics with admin
- · Honed skills in leadership, communication and teamwork through collaboration resulting in successful event execution
- Designed CTF (Capture The Flag) challenges with web-crawling, steganography, and SSH, hosted securely on DigitalOcean, engaging 100+ youth participants in cybersecurity problem-solving

Linux Enthusiast Jun 2020 — Present

- · Daily user of various Linux distributions including Fedora and Debian, with strong proficiency in UNIX-based systems
- · Regularly troubleshooting hardware, driver, and software issues, gaining hands-on experience in sysadmin and problem solving
 - Experienced with virtualisation technologies and hypervisor administration on Proxmox, VMWare, and KVM
 - Experimented with hosting local LLMs like Llama-3, Qwen, Mistral on Nvidia CUDA and Apple MLX

SKILLS

- Programming Languages: C, Java, Python, Bash, Dart, Terraform, Typst, English
- Tools: Git, Linux, KVM, Docker, Google Cloud Platform (GCP), OCI, Hugo, Flutter, GNU Radio
- Other Interests: Photography, Hiking, Coffee