

Gunwant Jain

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EDUCATION

Thapar Institute of Engineering and Technology, Patiala <i>B.E, Computer Engineering</i>	CGPA: 7.97 2019 – Present
OPG World School, Delhi <i>PCM, CBSE - All India Senior School Certification Examination (Grade XII)</i>	89.6% 2019
St. Mary's School, Dwarka, Delhi <i>CBSE - All India Senior School Certification Examination (Grade X)</i>	CGPA: 9.8 2017

PROFESSIONAL EXPERIENCE

SDE Intern, Dyte (YC W21) <i>Manager: Kushagra Vaish</i>	June 2022 – Contd. <i>Remote</i>
<ul style="list-style-type: none">• Maintaining some of the Internal Tools at the company• Worked on optimizing the internal tooling written in Go and improved the deployment times which now can take 70% less time• Worked on fixing and improving the Build Pipeline in Github Action for some of the internal tooling• Worked with Kubernetes, Helm Charts, AWS EKS, GCP GCR, etc.	
Research Intern, MITACS <i>Mentor: Heng Li</i>	June 2022 – September 2022 <i>Polytechnique Montréal</i>
<ul style="list-style-type: none">• Set up Multi-Cluster Hadoop on Google Cloud Platform• Collected logs from self-injected errors / job failures as the dataset• Automated the entire setup using Ansible	
Contracted App Developer, Excelegal –	March 2022 – May 2022 <i>Remote</i>
<ul style="list-style-type: none">• Developed the public facing Mobile app for Excelegal using the Flutter Framework• Utilized GetX for state management	
Student Developer, Google Summer of Code <i>Mentor: Benda Xu</i>	May 2020 – September 2020 <i>Gentoo Foundation</i>
<ul style="list-style-type: none">• Extended SharkBaitOS's support to System-as-Root Android Devices (Android 9.0+)• Wrote Bootstrap-init in C++ which builds the environment for System-as-Root devices and boots Android in a LXC container• Reworked AOSP's Python build scripts for its LLVM toolchain and introduced a AArch64 native build target for building AOSP natively• Wrote SAR-Preinit in Bash, which patches System-as-Root Kernels and makes it boot a pre-installed GNU/Linux chroot, instead of Android on a System-as-Root phone• Extensively documented and explained various Android concepts throughout in my blog.	

TECHNICAL SKILLS

Domains: DevOps, System Administration Android Open Source Project Development, Linux Kernel Development, Backend Web Development
Languages: C/C++, Python, Go, Rust, Bash)
Frameworks: Flutter, Flask, SvelteKit, Rocket (Rust)
Developer Tools: Git, Vim, Tmux, CMake, GCP, AWS
SysAdmin/OPs: Containers, Kubernetes, Helm, LXC, Docker, Traefik, Ansible, Terraform, Github Actions, Nginx, CI/CD

HONOR & AWARDS

- Globalink Research Intern 2022, **MITACS**, Polytechnique Montréal
- National Winner (Information Security track), **GRiD 3.0 Hackathon**, Flipkart
- **Google Summer of Code 2020** Scholar at Gentoo Foundation
- Second Runner Up, **HashHacks 4.0**, Cluster Innovation Centre, Delhi University

COLLABORATIVE PROJECTS

Flowdrive | *Java, Python, Linux System Administration, AWS, Docker, Sveltekit* Oct 2020 - Contd.

- Flowdrive is our collaborative project where why are yielding easy to install software which brings Advanced Driver-Assistance System to every car
- Our product runs natively on Mobile Phones, Desktops and small SBCs like Raspberry Pi and Jetson Nano
- Developed Flowinit - An init system written in Python, which runs and manages all the other daemons
- Developed and scaled Flowauth - Our Authentication microservice which integrated with technologies like AWS STS, and is serving to all our users
- Developed Flowdrive Connect - Frontend for viewing data collected from users
- Setup email, EC2 servers and CI/CD pipelines on AWS for all our self-hosted services and our website

Remote Asset Discovery Tool | *Go, Elasticsearch, Kibana, NATS, Ansible, Vue.js* Jul 2021 - Oct 2021

- This is the winning solution to the Information Security track problem statement for Flipkart GRiD 3.0 '21 Hackathon
- Go based tool that is able to monitor assets and be able to tell users all key information pertaining to the same
- Scan local and remote locations (using SSH tunnels) and maintain a database of last seen status, with IP address, MAC address, hostname, domain information, operating system.
- The entire deployment and reverse tunneling is managed using Ansible and SSH
- The NATS messages are stored in a machine-parsable format in Elasticsearch. The results can be viewed on the web interface, visualized on Kibana and consumed via Elasticsearch queries or API.

Khuim - Smart Travel Assistant | *Flutter, OpenCV, Dialogflow, Pytorch, Django* Jan 2020 - Feb 2020

- All-in-one virtual tourist guide which is available as an Android/iOS app. Used pre-trained Resnet Model along with transfer learning for image recognition. The user takes picture of monuments or landmarks and in return, important details (monument name, history, visitor-timings) are displayed.
- Natural Language Processing based ChatBot in the Help & FAQ section which assists user on multiple queries. Plan my trip section consisting trip itineraries, suggesting places to visit in order, to ensure optimum planning.

PERSONAL PROJECTS

Bin - Featureful yet Minimalist Pastebin | *Rust (Rocket), Javascript, Docker*

- Developed a Pastebin which offers multiple ways to send files, and not just Text.
- Currently holds 95+ stars on Github
- Implemented a robust CI/CD pipeline utilizing Github Actions which parallelly yields statically linked binaries for x86_64 and aarch64
- Reduced the overall load times to ~80ms over its revisions.
- Scores 100% in the Google LightHouse Test.

Barely Init | *Makefile, C, Busybox*

- This project was built as a byproduct of applying at Linux Kernel Mentorship Program 2021
- A set of makefiles which builds a simple initramfs which can boot on the architectures it was built upon
- Extended its support to using busybox as the initramfs' init

Zoom Auto-attender | *Bash*

- Simple scripts which auto-attends zoom meetings
- Fetches events from your calendar, and adds "at" jobs at the event times
- When the time comes, Dialogs ask you if you do not want to attend the meeting, and auto-attends it for you if no response was given

LC-3 Virtual Machine | *C*

- Developed a proof-of-concept Virtual Machine for the LC-3 Architecture written in C

Personal Blog | *HTML, Sass, Javascript, Zola (Rust)*

- Clean, modern looking personal blogging website using Zola