

Pranav Bansal

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EDUCATION

Imperial College London, *MEng Computing (4 Year)*

2019 – 2023

- Graduated with First class honors (74%), UTA for Computing (Compilers, Programming) and Maths (Algs, Logic)
- Masters thesis - worked with Microsoft Research on a new concurrency paradigm - *Behavior oriented Concurrency*

EXPERIENCE

Jump Trading, *Systems Engineer*

October 2023 - May 2025

- Part of the trading infrastructure team taking on responsibilities as a SWE, SRE and Network Engineer
- Built realtime exchange message monitoring system using **Rust**, **Go**, Kafka and ClickHouse.
- Built an automatic configuration management system using Python. Users configured the entire switch through YAML in a vendor-agnostic manner. Also built an LSP in NodeJS/Typescript, WebAssembly and a GitHub App server in Go to support the config ecosystem
- Developed a full stack web application responsible for monitoring and deploying quick fixes to the network using React and Python
- Built a metrics collection system to automatically collect interface level and other metrics from networking devices via various methods such as gNMI, nXAPI, eAPI, SSH and SNMP
- Developed a system to monitor realtime flow latency in Go in the network via sampled packet analysis
- Lead a unique automation and anomaly detection effort leveraging **local LLM** development with **LLM agent workflows** built using LlamaIndex and Langchain
- Automated on call inbox management with local LLM finetuning (LLaMa 3.2 8B) to automatically parse circuit and power maintenances/outages
- EU SRE Lead, focused on improving the on call experience, monitoring and observability coverage - worked with Splunk, SQL, Grafana

Neuralox AI, *Founder*

May 2023 - October 2023

- Built a hands on AI consultancy with a co-founder offering technical help to early stage start ups
- Consulted as an AI expert for multiple clients on a variety of issues - improving model accuracy, ML Ops and LLM fine tuning and inference.
- The business was cash flow positive throughout its lifetime but was shutdown due to scalability reasons

Jump Trading, *Technical Operation Systems Engineer Intern*

April 2022 - September 2022

- Built a scalable service framework using **gRPC** and **Go** for fast paced software development
- Built a high throughput, low latency big data pipeline to capture packet data in real time using Go and Redpanda
- Developed highly efficient algorithms to calculate throughput, detect packet queuing and analyze latency live

CISCO Systems, *Software Engineering Intern*

July 2021 - September 2021

- Developed a visualizer and query engine, for HashiCorp Vault using Golang and Redis; the project has since been Open Sourced (“cisco-open/plutus”)
- Deployed multiple applications using Kubernetes, Docker, Ansible and Helm

Adsum Finance, *Part Time Software Developer*

September 2020 – November 2020

- Worked with the founder and the clients to build a Customer Relationship Management System using Javascript React and Python FastAPI
- After the completion of the project, the company was selected for Goldman Sachs’ \$500M small and medium business initiative

Revmo, *Backend Developer (Contract)*

March 2021 - April 2021

- Worked part time during university as a backend developer mainly using Python and FastAPI
- Used asyncio in Python to improve performance of existing REST API endpoints

Kin Keepers, *ML Engineering Intern*

July 2020 - September 2020

- Developed an ML application that can detect abnormal fluid flow in households using pytorch (Python) and C
- Used fbprophet, an open source ML forecasting library by Facebook, in the ML engine. After the project, the company received a research grant from Facebook

PROJECTS

TextFSM Playground - A playground for parsing TextFSM templates on text output - textfsm-playground.prnvbn.dev

Plutus - A hashicorp Vault policy search and visualiser engine - [cisco-open/plutus](https://cisco-open.github.io/plutus)

PaaS - Platform as a Service using Rust and AWS to easily deploy web apps with load balancers and auto scalers

PintOS - Designed and Implemented major parts of an Operating System for the x86 instruction set

WACC Compiler - A five stage concurrent compiler for an OO concurrent language (WACC), programmed LISP in WACC

ARM Virtual Machine - Programmed a 32 bit ARM emulator and assembler using C

Golang Blockchain module - with features like persistence, transactions, wallets, consensus algorithms and merkle trees

TECHNICAL SKILLS

Languages: Golang, Rust, Python, C++, Javascript, Typescript, Java,

Software/Tooling: Git, gRPC, Kubernetes, Helm, Docker, Ansible, Linux, Latex, WebAssembly

AWARDS

IC HACK 2023 *Best Frontiers* for building “EditAI” (image editing using text based prompts) using AWS lambda, NextJS

IC HACK 2022 *Best Developer Tool* for building a VS Code extension “Oh Hey” using JavaScript and Go

Google Foobar Completed all stages of Google foobar, an invite-only coding challenge by Google.