Resume - Vinay Keerthi K. T.

Key Skills

- Programming Languages: Python, Rust, Javascript
- Generative AI: Deepseek R1 (locally hosted the distilled model), Llama 3.1, ChatGPT
- GenAI Tooling: ollama, ChatGPT API Development, LM-Studio
- Web Frameworks: Flask (Python), Axum (Rust), Expressjs (Node/Deno)
- Have been using Linux for over 20 years (since 2005)
- UI: React, CSS, ES6
- Databases: PostgreSQL, MariaDB, Clickhouse, Tigergraph
- Containers: Docker, Podman, Kubernetes
- Others: Apache Airflow, Dagster, RabbitMQ, ElasticSearch, Redis, Jenkins, Github Actions, pre-commit

Experience

ChainSafe

Engineering Manager / Lead Software Developer | **Fully Remote** | **November 2022 - February 2025**

- Managed a team of 4, providing technical and career-based guidance.
- Worked on **Python** and **Rust** based tooling for developers, including internal monitoring scripts, data-quality alerting systems and setup **dagster** for data pipelines for accounting and blockchain event tracking.
- Evaluated **LLM** based tooling for management, investigating cost vs benefits to automate report generation and automated cleanup of github projects and issues. Worked with **OpenAI ChatGPT 4** and **Llama 3.1**
- Worked on building a custom **LLM** that interfaces with internal and external APIs, providing a chat-based interface for managers to track and manage their teams' OKRs in line with the organization's goals.
- Worked on building an inhouse **LLM** that uses Solidity audit data to provide customers with a bot that can assist them in self-audits.
- Created dashboards and metric collectors for EVM wallets to track balances and alert cross-chain contract creators when the balance is below the threshold.
- Worked with external stakeholders for proof-of-concept in projects across blockchains, including, but not limited to, nym, filecoin and **ethereum**.
- Worked with technology leaders in requirements gathering, writing work proposals and ran sprints with developers to meet customer deadlines.
- Reviewed **Rust** code across projects, providing insight into improving code quality and adherance to the core spirit of the language.

BE Mechanical Engineering (2010)
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- Worked on a **Rust** networking library integrating `libp2p` with blockchain protocols.
- Worked on building **solidity** tooling for `foundry` to deploy to multiple chains using the Sygma framework.
- Developed tutorials for on-boarding new developers to the company's technology stack, including **Substrate** and **Rust**.

Merkle Science

Lead Software Developer | **Bangalore** - **Remote** | **JULY 2021 - November 2022**

- Built a team for internal tooling, managed scouting for talent, hiring and interviewing.
- Created a **Rust** library for the **Polkadot** blockchain for internal use, exposed via `PyO3` and `maturin` into **Python.**
- Created a **Rust** library for ingesting data from various blockchains with low latency.
- Conceptualized and developed the data-engineering toolkit - a multi-faceted **CLI** that facilitates the movement of data across data stores, and opens up our data layers for quality and consistency-related metrics, using **Rust**.
- Designed the alerting system for all our services.
- Designed and wrote the data quality service using **Rust** - this application goes through the data of various **blockchains** to identify missing or newer data.
- Reworked the internal packaging system to leverage modern **Python** practices such as `poetry`.
- Designed a load-balancer to place over our blockchain nodes (internal and vendor-hosted). Led a team of 2 engineers who built this.
- Designed and wrote a websocket client to ingest blockchain data from various websocket implementions of chains using **Rust.**
- Overhauled **Apache Airflow DAGs** for modularity.
- Developed a central **Python** library for all utilities and internal code.

VISA Inc.

Sr. Software Engineer - Data Platform | **Bangalore** | **MAY 2019 - June 2021**

- Created dashboards to visualize productivity during the onset of COVID-19 so that managers could identify the distribution of workload.
- Designed and spearheaded the security portal project, a REST layer that facilitates automation of Qualys security updates for PCI compliance while adhering to company-specific rules regarding service availability, using OSS and internal APIs to minimize maintenance time. Reduced contractual manpower by 75% and downtime by 70 hours a month for 2400 servers.
- Mentored college graduates to build their first applications, integrating native pipelines, helped them craft detailed documentation and tune the performance of their apps.
- Developed internal tools to orchestrate servers, including a tool to run parallel ssh-based connections, like `ansible`, but with company-specific requirements.
- Designed and developed a tool that allows developers to quickly get started with projects, building pipelines and bootstrapping the initial code for them, while setting up quality checks, running automated tests and uploading artifacts to the right registry in JFrog Artifactory.

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- Conducted Python workshops with a varied audience, training them on how to set up Python projects, how to package them and how to build python modules so that they are shareable.
- Mentored and trained SDE-1s and interns, guiding them in design and implementation details.

GKN Aerospace India

Sofware Engineer | **Bangalore** | **DEC 2015 - MAY 2019**

- Built a company-wide search engine that indexed all files in an Elastic-Search server and allowed users to query even the contents of files such as spreadsheets *and* 3D models of Gearboxes using specific classification criteria.
- Built wrapper libraries in Python leveraging `PyCuda` and NVIDIA libraries for engineers to use within `Jupyter` notebooks.
- Managed `Jenkins` pipelines and `Subversion` source code registry singlehandedly.
- Designed and developed a microservice-based application to automate complex engineering pipelines involving proprietary software and protocols.
- Designed the system interaction and data pipelines for a large-scale application that submits HPC jobs to servers placed across the world.
- Conducted annual training in Python and Data Analytics for Mechanical Engineers.

Flipkart Internet Pvt. Ltd.

Copy Editor / Developer | **Bangalore** | **FEB 2014 - DEC 2015**

- Used `PyQt` and `Python` to build a work allocation tool for writers, that allowed them to report their work and set up pipelines for editors and content-creators to leverage their output.
- Created an application to generate thousands of Infographics on Products for sale during the Big Billion Day

Tech Stack

- Programming Languages: Rust, Python, Javascript
- Web Frameworks: Flask (Python), Axum (Rust), Expressjs (Node/Deno)
- UI: React, CSS, ES6
- Databases: PostgreSQL, MariaDB, Clickhouse, Tigergraph
- Containers: Docker, Podman, Kubernetes
- Others: Apache Airflow, Dagster, RabbitMQ, ElasticSearch, Redis, Jenkins, Gitlab CI, pre-commit
- Have been using Linux for over 20 years (since 2005)

Personal Projects & OSS

- Write regularly about technology and a life as a software engineer at stonecharioteer.com
- Spoke at IndiaFoss2.0 in a Birds-of-a-feather event - Is Rust Ready for Enterprise Adoption?
- Spoke at the Bangalore Python Meetup about using Rust as a Python developer - Explicit is Better than Implicit - Rust for Pythonistas

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- Livecasted myself reading the PostgreSQL Documentation over a weekend for fun.
- Spoke at PyCon India 2019 on MicroPython: Building a Physical Inventory Search Engine.
- Built a visualization dashboard atop of BitBucket and Github, to visualize developer productivity and project momentum using statistical control charts.
- Regularly conduct workshops on `Flask` and `Python` at the Bangalore Python meetup group - Web Application Security with OWASP Principles, Flask Workshop
- Built my own Raspberry Pi Kubernetes Cluster out of 4 Raspberry Pi 4 and 4 Raspberry Pi Zero W boards.
- Built my own Mechanical Keyboards using the QMK framework.
- Completed the Advanced Kubernetes Training from `learnk8s.io`

Other Experience

- **FEB 2011 - FEB 2014**
  - Trained in using statistical control methods for improving quality and production at TVS group companies.
  - Interned at IISc, Bangalore, used Python to study the strength of airplane wing composites.

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