Indiranagar
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Raghav Kuppan

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Education

Atlanta, GA	Georgia Institute of Technology	Aug 2017 – May 2019

- M.S in Electrical and Computer Engineering, Specialised in Machine Learning. GPA: 3.9/4.0

Tiruchirappalli, India	National Institute of Technology	Jul 2013 – May 2017

- B.Tech in Electronics and Communications Engineering, GPA: 8.94/10

Experience

Senior Software Engineer	Zeta	May 2022-Nov 2024

- Designed and built a Disputes Management System for Zeta's Credit Card Processing System for a throughput of **20,000 disputes a day**.
- Was sole maintainer for the Prepaid Accounting system used by HDFC Payzapp and Sodexo cards. Performed critical performance improvements that pushed throughput for Balance and Account **queries to 1000TPS**
- Smoked out and fixed several performance and concurrency bugs including in open source libraries -> `https://github.com/MeltanoLabs/target-postgres/issues/169`
- Guided junior engineers and interns on crucial projects and dedicated time for Code Reviews and weekly catch-ups.

Software Engineer	Varian Medical Systems	Jun 2019-Apr 2022

- Helped build and design the Cloud Connector - a system for fast transfer of medical data across hospitals in a HIPAA compliant way, serving **10+ major Cancer Centres** across the US and EU .Supported automatic imaging and creation of router software, management of NUCs using Ansible/systemd and AWS infrastructure to manage routers and relay data.
- Helped build and design the infrastructure for an AI Image Segmentation Service that allowed clinicians to automatically segment cancerous tissue in CT scans with a single button-click.
- Rewrote core sections of VelocityAI in modern C++ using smart pointers, fixed several memory leaks.
- Regular visits to Cancer Centres for interactions with Radiation and Medical Oncologists to discuss Software and UX Improvements.

Research Intern	Cobalt Speech and Language	Jul 2018-Dec 2018

- Built speech recognition and NLP models using the Kaldi toolkit. Validated and tested Speech models using shell/Go scripts; achieved production grade Word Error Rates (<10%)
- Wrote a microservice in Go to format and truecase sentences; achieved accuracy of over 90%

Technical Experience

Projects

- **Llama2-Rust** (2023). Rewrote Andrej Karpathy's llama.c in Rust. See link
- **Advent of Code** (2020, 2021, 2022, 2024). Completed puzzles in the Advent calender in Rust. See link

Awards and Publications

- **Zeta Outstanding Performer (2023-24):** Awarded Outstanding Performer including Bonus and Stock Grant.
- **Cobalt CoW, Austria (2018):** Invited to week-long working retreat in Austria.
- **Mitacs Globalink Research Internship Award (2016):** Summer Research Internship under Prof Abu Sesay at the University of Calgary.

Languages and Technologies

- Java; Python; C++; Rust; Javascript; Go;
- Docker, Kubernetes, Terraform, AWS, PyTorch, Linux, Scikit-learn, WebGL