ARUN RAVI

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SUMMARY

Software Engineer with 3+ years of experience building scalable, reliable infrastructure for large-scale AI and cloud computing systems. Currently at Google, developing low-latency, high-throughput distributed systems powering LLM training infrastructure.

EXPERIENCE

GOOGLE Sunnyvale, CA
Software Engineer II → Software Engineer III *Jan 2023 - Present*
Software Engineering Intern *May 2022 - Aug 2022*

- Developing a production-grade GPU networking system daemon required for LLM training.
- Productionizing network security controls that aim to remediate a Google wide security vulnerability.
- Deployed a data analysis pipeline that reduced false positive network packet drop volume by 95%.
- Designed a packet sampling pipeline that improved GCP's network compute cache hit rate by 12%.
- Implemented a query API that increased Google Cloud's network connection resolution rate by 15%.
- Successfully leveraged packet sampling to reduce BPF ACL evaluation performance by 70%.

SAMSUNG RESEARCH Bangalore, India
Software Engineering Intern → Software Engineer *Jan 2020 - Aug 2021*

- Implemented cost-effective means of reusing existing 4G infrastructure for nascent 5G technology.
- Ported 2,000 plus test cases to enable simulation-based testing for 4G/5G modem architectures.
- Productionized an inventory management system, used by 1000+ engineers, to access test hosts.

SYNCONEXT Bangalore, India
Networking Intern *May 2019 - Jul 2019*

- Reduced network discovery time for IoT equipped Air Handling Units through BACnet clients.
- Optimized building power consumption by directly controlling IoT equipped Air Handling Units.

TECHNICAL SKILLS

- **Programming Languages:** C/C++, Rust, SQL, Python
- **Frameworks & Tools:** Docker, Borg, CI/CD, gRPC, Linux, Git, Mercurial, Bazel, Piper, BPF, PyTorch

EDUCATION

University of Wisconsin - Madison *(M.S. in Computer Science)* 2022
Manipal Institute of Technology, India *(BTech. in Computer Science, Minor in AI/ML)* 2020

PROJECTS

Data Augmentation for Reinforcement Learning

- Trained a data augmented RL agent for 10 million steps to improve initial sample complexity by 5%.
- Improved performance in a sparse reward environment by 50% through episodic data augmentation.

Reinforcement Learning for Robot Soccer

- Developed reinforcement learning agents to help humanoid robots play soccer autonomously.
- Created simulated environments to generalize robot reinforcement learning policies (Sim2Real).
- Winners of the 2024 Robocup Standard Platforms League Challenge Shield competition.

Parikshit Nanosatellite

- Engineered a real time distributed data handling system which reduced read latency of sensors.
- Developed a dynamic power management algorithm that improved battery load balancing by 2x.