Swathi Bhat

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TECHNICAL SKILLS

Languages: C++, Python, T-SQL, JavaScript, C, C#, ReactJs, Typescript, HTML5, CSS, Shell
Frameworks and Tools: Microsoft SQL Server Management Studio, Terraform, Azure Data Explorer, PowerBI, T-SQL, Powerapps Component Framework, Microsoft Dynamics 365, .NET framework, Azure DevOps, Linux, Agile methodology, Git, Visual Studio

EXPERIENCE

Arista Networks   Santa Clara, CA
Software Engineering Intern   June 2024 – Sep 2024
- Contributed to Arista's distributed firewall within the Zero Trust Networking suite by resolving offload feature issues and restored CLI functionality for IPFIX flow viewing. Developed automated tests that revealed a performance bottleneck in the command's implementation due to the removal of gRPC usage.
- Architected a rigorous test plan for the firewall's offload algorithm, simulating up to 10 million flows to validate scalability and correctness. Implemented 67% of the planned tests, uncovering a critical bug in the firewall where outdated offloaded flows were not cleared from the cached results of specific switches.

Microsoft   Bangalore, India
Software Engineer 2   July 2019 – July 2023
- Led the migration of Dynamics 365 Customer Service's scheduling module to the Universal Resource Scheduling (URS) engine by resolving system-level cache invalidation issues, ensuring feature compatibility, and building an accessible schedule board, enabling seamless operations for high-impact COVID-19 appointment scheduling use cases.
- Built a GDPR-compliant data pipeline integrating telemetry from Azure Data Explorer and customer data to track migration to the new scheduling engine. Created Power BI dashboards that drove leadership actions, enabling 300+ organizations, including 10k+ user enterprises, to adopt URS within five months of release.
- Owned and resolved all service scheduling-related incidents during migration to the new engine, ensuring zero incidents within six months. Collaborated closely with a key enterprise customer, delivering specialized features within a month for seamless platform migration, ensuring customer satisfaction and smooth release.
- Designed and implemented robust features for case management, supporting 2M+ monthly users. Reduced case resolution time by over 75% (from 14 to 3 clicks) and improved agent productivity, driving a 30% reduction in agent manpower through efficient workflows and customizations within the Dynamics 365 platform.

Fidelity Investments   Bangalore, India
Software Engineering Intern   May 2018 – July 2018
- Developed a proof of concept for a trade notifier system using Apache Kafka, replacing the legacy mainframe. Showcased enhanced persistence, fault tolerance, and sub-13ms latency for 11,000 trade records, convincing stakeholders to adopt Kafka.

EDUCATION

University of California Santa Barbara   California, USA
*Master of Science in Computer Science, **GPA: 4.0/4.0***   Sep 2023 – Present
Courses: Advanced Operating Systems, Advanced Distributed Systems, Runtime Systems, Blockchains and Cryptocurrencies

National Institute of Technology, Karnataka, Surathkal   Surathkal, India
*Bachelor of Technology in Information Technology, **GPA: 9.10/10.0***   July 2015 – May 2019

PROJECTS

- **File System using FUSE | Operating Systems**: Built a robust, fully functional ext-4 Linux file system from scratch using FUSE (File System in Userspace) library along with the capability to mount and unmount the file system [Code]
- **LogSmart | LLMs for network security**: Engineered infrastructure for network simulation and created a log analysis platform that leverages LLM APIs to improve the contextual understanding of alerts and network security events. [Code]
- **Static program analysis**: Programmed advanced static analysis methodologies including data flow, control flow, program slicing, Andersen's pointer analysis and taint analysis. [Code]

LEADERSHIP AND ACTIVITIES

- **Graduate Teaching Assistant:** Taught discussion sessions for upper-division courses, including Theory of Computation & Automata, Distributed Systems.
- **Computer Society, IEEE-NITK Student branch :** Co-head of theoretical computer science interest group
- **Carnatic classical music :** Trained senior level vocalist