

Amith Kini Mattar

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Bryan, TX 77801

EDUCATION

Texas A&M University, College Station, Texas

May 2024

Master of Computer Science; GPA: 3.88/4

National Institute of Technology Karnataka, Surathkal, India

May 2019

Bachelor of Technology in Information Technology; GPA: 9.01/10

SKILLS

- **Programming Languages:** Python, C, C++, JavaScript, TypeScript, Rust, HTML, CSS
- **Tools and Frameworks:** Linux, Git, PyTorch, CUDA, Docker, Django, Node.js, React, MySQL, AWS, Next.js

EXPERIENCE

Texas A&M University, College Station, Texas

Aug 2023 - Dec 2023

Graduate Teaching Assistant

- Teaching Assistant for CSCE 625 - Artificial Intelligence, assisted nearly 100 students
- Responsible for grading assignments and exams, holding office hours, and helping students with their doubts.

Arista Networks, Bengaluru, India

Jul 2019 - Jul 2022

Software Engineer

- Spearheaded mission-critical feature enhancements in the Quality of Service (QoS) domain for datacenter switches used by major network providers in Europe and ISPs in Australia.
- Designed and deployed Interface policing for ACL policy-maps as a lead developer, scaling the existing support by 20 times.
- Engaged consistently with the Customer Support and Proof of Concept teams to troubleshoot critical issues and offer support in network topology and configurations.
- Mentored and integrated new team members, getting them up to speed in work methodologies and tool proficiency.
- Engineered a solution that reduced maintenance tasks from 20 minutes to 2 minutes, substantially boosting productivity.

Arista Networks, Bengaluru, India

May 2018 - Jul 2018

Software Engineer Intern

- Developed Layer 2 Protocol Forwarding capabilities to enable ISPs to direct L2 Protocol packets over pseudowire tunnels.
- Executed inter-process communication in C++ for hardware programming applications.
- Established unit and integration testing frameworks with Python for regression testing.

YellowAnt, Bengaluru, India

May 2017 - Jul 2017

Software Developer Intern

- Contributed to the integration of new apps into YellowAnt's ChatOps platform with the help of AWS EC2 and Lambda.
- Utilized SDKs from Salesforce and Sentry to build applications, leveraging the Django framework for backend development.
- Conceived a Proof-of-Concept for natural language-based textual input in the chat application.

PROJECTS

- **DataViz Chatbot:** Developed a cutting-edge chatbot leveraging GPT-4 and React Server Components to generate SQL and visualize data, enhancing human-AI interaction. Apr 2024
- **Cache replacement:** Reproduced the results of EMISSARY cache replacement study, focusing on instruction caching for modern processor architectures. Implemented the policy on Ubuntu 64-bit with x86 architecture using the gem5 simulator and achieved a 10% improvement in cache line eviction on processor performance and speedup over existing algorithms. Dec 2023
- **CyberAI:** Developed a malware defense and generation system using XGBoost and LLMs. Validated robustness through VirusTotal and sandbox testing, focusing on maintaining malware functionality. Mar 2023
- **Interface Policing:** Led the development of a high-scale, time-sensitive feature for Arista's EOS network OS. Implemented state management and fault tolerance, enhancing reliability for network environments. Sep 2021
- **Fooling DNN:** Created an adversarial image generator using genetic algorithms and CNN, focusing on exploiting vulnerabilities in single-image model pipelines and emphasizing the need for enhanced model robustness. Nov 2017

HONORS

- Awarded a prestigious fellowship scholarship from the Computer Science Department at Texas A&M University.
- Won 2nd place in company-wide hackathon organized at Arista Networks.
- Executive member of Flying and Robotics Club, NITK.
- Secured a rank of 25 in state level engineering entrance test among 120,000 candidates.