Shimona Mohan Prabhu

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EDUCATION

University of California, Davis, CA   **Sep 2021 – Jul 2023**
Master of Science in Computer Science   *GPA: 4.0/4.0*

PES University, Bangalore, India   **Jun 2015 – Apr 2019**
Bachelor of Engineering in Information Science and Engineering   *GPA: 8.35/10*

TECHNICAL SKILLS

- Languages - Python, Java, C, C++, Matlab
- Web Technologies - HTML, CSS, Javascript, Angular, React, Django, NodeJS, PHP
- Databases - MongoDB, MySQL
- Operating Systems - Unix, Linux, OSX, Windows, Kali
- ML - NumPy, Pandas, Tensorflow, Keras, PyTorch, CUDA
- Certifications - Cisco Certified DevNet Associate, CCNP and CCNA Routing and Switching, CCNP Enterprise
- Others - AWS, Terraform, Google Cloud, Github, Kubernetes, Docker, Ansible, Heroku, Arduino, RaspberryPi, Wireshark, GNS3

EXPERIENCE

Goldman Sachs   **Dallas, TX, USA**
Software Engineer   *Jul 2023 – Present*
- Designed and commissioned probers to increase observability of VPCs and AZs to deliver 99.999% SLA of various BU services.
- Enhancing robustness of edge DMZ patterns that enable connectivity of internal applications.

Goldman Sachs   **Dallas, TX, USA**
Software Engineer Intern   *Jun 2022 – Aug 2022*
- Deployed a standalone Flink cluster on ECS Fargate to accelerate the adaptation of cloud-native services and optimize ingestion within the data lake. The AWS CDK stack contained S3, EC2, ELB, Route53, and other constructs compliant with guardrails.
- Built a docker image to spin off Python scripts that generate Flink config files for Job Manager - Task Manager communication. It exposes the REST API endpoint used to submit jobs - the resources for which are dynamically scaled and pre-provisioned.

University of California, Davis   **Davis, CA, USA**
Graduate Teaching Assistant   *Sep 2021 – Jun 2022*
- Conducted discussions, moderated lectures, graded assignments, and held office hours for Intro to Programming using Python.

Cisco   **Bangalore, India**
Software Engineer   *Jul 2019 – Sep 2021*
- Mined and analyzed data in Snowflake, SAP HANA, Tableau, and Alteryx to model various Cisco Services. Employed advanced statistical concepts to optimize product development and predict business strategies, driving revenue up by $536 million.
- Developed a project delivery tool with Django and Angular to streamline the pipeline and track stages of the project's lifetime. By clustering similar networks, the tool phased out 27% of redundant projects and saved upwards of $12 million.
- Collaborated with Cisco Technical Assistance Center to track the backlogged support cases and trend it against incoming support case volume. The tool developed using Python saved approximately 900+ hours for engineers and customers alike.
- Designed, scaled, and optimized various aspects of customer networks - data centers, security applications, and collaboration devices spanning a broad range of technologies like IP routing, LAN switching, IP routing, Wireless, SD-WAN, and ACI.
- Identified security vulnerabilities and implemented workarounds to secure customer networks and maintain data integrity.

PROJECTS AND PUBLICATIONS

- **Google File System** - Implementation of GFS capabilities, including concurrent reads/writes and inconsistency handling (C++).
- **SSH Honeypot** - Low-interaction honeypot listens to SSH sessions, logs activity, and gathers intelligence on attacks (Python).
- **Handwritten Digit Prediction** - Employed hypothesis and instance transfer (SVM) with 89% accuracy (Python).
- **OTT Recommendation** - Achieved MSE of 1.02 using denoising auto-encoding ANN and deep embedded clustering (Python).
- **Remote Weather Assistant -** LoRa network prototype integrated with a weather assistant that empowers farmers to derive actionable insights, making agriculture precise and cost-efficient (C++, Python). Shimona Prabhu M, Dr. Annapurna D, et al. (2019). Remote Weather Assistant using LoRa Network. Advancement of Computer Technology and Its Applications, 2(2), 1–9.
- **Image Rendering Optimization** - Optimized the anti-aliasing algorithm in indigenous defense satellites by 36% (OpenGL).
- **Health Monitor -** Dashboard to make healthcare accessible, irrespective of location or socioeconomic standing (Angular, Java).

AWARDS AND ACHIEVEMENTS

- **Benefit Everyone - You Inspire 3, Cisco** - Awarded for stepping up and developing automation tools to accelerate innovation.
- **Our People Deal - You Inspire 2, Cisco** - Awarded for consistency in deliverables and taking initiatives.
- **APJC Winner - SANS Cyberstart, Winner - DoSelect Code, Top 10 - Secure Code Warrior, Finalist - Intech Olympiad.**
- **Technical Director, Women in Computer Science** - Curate and conduct technical workshops to empower women in tech.
- **Team Leader, STEM for Girls** - Led a full day immersion into STEM to make STEM accessible for students.
- **APJC Giving Back Lead, Cisco** - Organized giving back initiatives and amplified the organizational impact on the community.
- **Secretary, IEEE PESIT-BSC Student Chapter** - Served on the executive committee of the IEEE branch of PES.
- **Lead Organizer, TEDxPESITBSC** - Led the TEDx chapter of PES as the licensee and speaker curator.