

Supreet Deshpande

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA, USA

Expected December 2022

Master of Science in Information Networking

Relevant coursework: Computer Systems, Fundamentals of Networks, Information Security

Pune Institute of Computer Technology, Pune, MH, India

July 2013 - May 2017

Bachelor of Engineering in Information Technology

Relevant coursework: Distributed Systems, Cloud Computing, Operating Systems

WORK EXPERIENCE

Espressif Systems

Pune, MH, India

Senior Software Engineer

July 2021 - August 2021

- Implemented secure-boot, a core security feature in the open-source ESP-IDF. Contributions: [[Core](#)], [[Tool](#)]
- Conceptualised and implemented ESP-Insights, a debugging cloud for IoT devices aiding IoT device makers to identify and fix bugs within days of production deployment.
- Enhanced the client libraries for HTTP, TLS, MQTT and Over the air updates (OTA). Contributions: [[Link](#)]
- Joined after series A, Espressif raised an IPO (\$2Bn) in Aug 2019 with only 200 employees.

Software Engineer

June 2018 - July 2021

- Ported Apple's HomeKit protocol onto ESP8266 (160Kb RAM). Reduced the cost by 3x making it one of the highly cost-optimised Homekit implementations. Optimised the TLS handshakes for cloud communication over HomeKit.
- Led the x509 certificate claiming efforts to enable out-of-box cloud connections for makers. Further extended this to securely provision certificates into IoT devices during manufacturing.
- Maintained the cloud SDKs supporting Microsoft Azure IoT cloud, GCP IoT core and AWS IoT cloud.
- Collaborated with the university hiring team to design the training program, devise tests & organise sessions.

Dell-EMC

Pune, MH, India

Software Engineer

August 2017 - June 2018

- Orchestrated backup and disaster recovery in a multi-cloud environment.
- Added network configurability and file-level recovery during restoration, won the Dell EMC Silver Award 2018 for this feature.

Project Intern

June 2016 - May 2017

- Developed a Software-Defined Wide Area Network (SD-WAN) controller facilitating centralised network policy management.
- Awarded 3rd prize in the Network and Security among 250 participants at Impetus and Concepts 2017.

SKILLS

Programming Languages : C, C++, Go, Python

Technologies: Bash, Wireshark, Git, GNU Make, GDB, Docker, ESP32, ESP8266, AWS, Apple HomeKit, Docker, Elasticsearch, Apache Kafka.

OPEN SOURCE CONTRIBUTIONS

- Community

Solved numerous github issues, answered forum questions and reviewed external pull requests while at Espressif.

- EspTool: [[Contributions Link](#)]

Added tooling support in python for secure boot.

- Amazon Freertos: [[Contributions Link](#)]

Enhanced just in time provisioning (JITP) handling for IoT cloud connectivity in upstream Amazon FreeRTOS.