MEGHA SINGH

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EDUCATION

University of Massachusetts Amherst Amherst, United States
Master of Science, Computer Science | GPA: 4.0/4.0 *Expected Graduation : May 2025*
Relevant Courses: Distributed Computing and Systems, Secure Distributed Systems, Machine Learning

Vellore Institute of Technology Vellore, India
Bachelor of Technology, Electronics and Communication | GPA: 3.57/4.0 *Jul 2014 – Apr 2018*
Relevant Courses: Computer Programming, Data Structures and Algorithms, Computer Architecture

TECHNICAL SKILLS

- **Programming languages:** JAVA, Python, Ruby, SQL, HTML, CSS, React.js, Solidity
- **Tools and OS:** REST APIs, MongoDB, Git, AWS, PowerShell, Selenium, JIRA, Jenkins, Linux
- **Technologies:** Virtualization, Distributed Systems, Cloud Computing, Web Development, Blockchain

WORK EXPERIENCE

VMware Bangalore, India
Member of Technical Staff *Aug 2020 – Jul 2023*

- Engineered scalable microservices enabling Multi-Cloud Architecture and Virtualization, slashing deployment time and infrastructure costs.
- Designed and Implemented APIs for Non-Disruptive VM Upgrade, reducing vCenter server software upgrade downtime from several hours to 5 minutes, $\approx 1500\%$.
- Automated software testing workflows and configured them in a CI/CD pipeline, reducing manual effort by 80%.
- Revamped ConfigStore CLI (tool to manage host configurations) overhauling the existing system with 20+ user-friendly interface options, leading to a 50% decrease in user errors.
- Resolved 50+ complex customer issues in collaboration with customer support teams.
- Propelled improvements to vSphere ESXi Lifecycle Manager, centralizing host configurations and yielding a daily savings of 4 engineering hours.
- Delivered monthly cross-team knowledge transfer sessions to facilitate improving technical expertise.

Espressif Systems Pune, India
Staff Engineer *Jan 2020 – Aug 2020*

- Constructed a CLI framework for ESP-Rainmaker (open-source software for hassle-free deployment of an IoT device network) to add and modify devices and their state, in as less as few seconds.
- Enhanced integration of ESP32 chip with Alexa built-in devices, using Python automation, overcoming the redundancy of managing complex cloud services, making it easier than ever to build low-cost Alexa devices.

Johnson Controls Pune, India
Engineering Associate *Jul 2018 – Dec 2019*

- Minimized the costs of evaluating a security product geographically blocked from working in India, by designing a virtual setup using Python, Jenkins, and Virtualization, also accelerating project completion by >75%.
- Debugged 30+ issues on Connect24 portal (website for administering security alarm devices) using ReactJS.
- Optimized false alarm detection capabilities within the iOtega home security panel using JAVA Spring Boot.

Intern *Jan 2018 – Jun 2018*

- Eliminated 40% use of physical storage disks by building a Cloud Storage Disk using MongoDB and Node.JS for a small-scale Building Management System.

PROJECTS

- **VM Latency Monitoring Tool** *Jun 2021*
  Innovated a tool to monitor real-time VM latency during software upgrade and suggest memory/network customizations to fasten upgrade process, increasing time efficiency by 65%, using historical latency data and support logs, Python and Jenkins CI/CD pipeline.

- **Chat Application** *Jun 2018*
  Built a RESTful API Instant Chat Application using Node.JS and Socket.IO, supporting multiple active users.

- **Image-to-Speech Converting Smart Reader** *Apr 2018*
  Created an economical Image-to-Speech Converter to convert handwritten text to audio, using Python OCR, NLP, and Raspberry Pi, having $\approx 25\%$ improved performance than existing systems.

- **Simulating Database Concurrency and Transactions** *Mar 2017*
  Simulated a distributed database in JAVA with transaction management and concurrency control, featuring two-phase locking, multi-version read/write consistency for transactions, and deadlock detection.

HONORS AND AWARDS

- Elevate Our Best: VMware *Jan 2022*
- Employee of the Month: Johnson Controls *Oct 2019*
- Pat on the Back: Johnson Controls *Jul 2019*