SUYASH PATEL

suyashpatel98@gmail.com

EDUCATION

Birla Institue of Technology and Science, Pilani	**2015-2019**
B.E (Hons.) Computer Science	*7.81/10*
Kendriya Vidyalaya, Ambarnath	**2015**
All India Senior School Certificate Examination	*95%*
Kendriya Vidyalaya, Ambarnath	**2013**
All India Secondary School Examination	*10/10*

WORK AND RESEARCH EXPERIENCE

VMware, Inc.   **Pune, India**
Member of Technical Staff - 2   *June 2020 - Present*

- Working on building VMware's Network Function Virtualization (NFV) solution TCA (Telco Cloud Automation) for 5G telecom providers in accordance with the ETSI NFV framework. Involved in writing code for the NFV Orchestrator.
- Created a CI/CD pipeline using Jenkins to deploy staging environments for testing VNF/CNF (Virtual Network Function/Container Network Function) functionality. Each Jenkins job brought up software-defined datacenters (SDDCs) and deployed VMs to run VNFs.

Department of Computer Science and Information Systems, BITS Pilani   **Pilani, India**
Remote Research Intern   *September 2019 - September 2020*

- Worked with Prof. Amit Dua (BITS, Pilani) and Prof. Neeraj Kumar (Thapar Institute of Engineering and Technology, Patiala, India) to design an efficient authentication protocol for Device-to-Device communications in 5G networks.
- Submitted a research report titled, "A secure scalable authentication protocol for device-to-device communications using ECC" that laid the foundation for future research.

VMware, Inc.   **Pune, India**
Intern and Member of Technical Staff   *January 2019 - June 2020*

- Fixed numerous bugs in a VMware product called HCX. VMware HCX enables zero-downtime migration of live virtual machines from one datacenter to another datacenter across geographies among many other things.
- Implemented a CI/CD pipeline for VMware HCX and VMware's SDN solution NSX using Jenkins. The pipeline created was used by tens of developers to deploy staging environments for testing purposes.

Samsung Research Institute   **Bengaluru, India**
Intern   *May 2018 - July 2018*

- Developed a voice-enabled application in Java for Linux using Samsung's voice assistant Bixby's REST APIs.

Delta Step Learning   **Kolkata, India**
Intern   *May 2017 - July 2017*

- Developed an Android application to complement the web e-learning product.
- Implemented authentication, embedded videos using YouTube API and displayed content using REST APIs.

PROJECTS

- **Compiler in C:** Wrote a compiler in C to compile a language with given specifications to NASM assembly language. Components implemented included a lexer, parser, semantic analyzer, type checker and code generator.

- **BitTorrent client:** Wrote a BitTorrent client in Go. The client used BitTorrent (P2P protocol) to download and distribute files by connecting to peers.

- **Tic-Tac-Toe AI agent:** Wrote an unbeatable AI agent for Tic-Tac-Toe in Java using the minimax algorithm with alpha-beta pruning optimization. Designed REST APIs and created a full-stack web application using React.js for front-end and Spring Boot for back-end. Orchestrated two containers using docker-compose to serve the website on Microsoft Azure.

- **SimpleFS filesystem:** Implemented a basic filesystem in C that was emulated over a simple text file on the disk. A library of functions was exposed by abstracting the implementation of the superblock and inodes. Wrote basic file operations (opening, reading and writing files) using the exposed library on top of the filesystem.

TECHNICAL SKILLS

- **Programming Languages:** Java, C, Javascript, Python, Shell scripting, Go
- **Tools and Libraries:** Docker, Kubernetes, Redis, Kafka, React.js, Express.js, Spring

AWARDS

- Received a certificate of merit and a letter of appreciation from the honorable **HRD Minister of India** (Smt. Smriti Irani) for exceptional performance in the CBSE AISSCE, 2015