

# Swapnil Bhosale

1101 Courtney Road, Arbutus, MD, 21227 USA

☎ (+1) 410-900-3119 | ✉ swapnil.bhosale@umbc.edu | 📷 SwapnilBhosale | 🌐 bhosaleswapnil

## Summary

Currently, interning with River Loop Security on their firmware analysis security platform. 4 years of software development experience specializing in back-end development, IoT, distributed computing, computer security. A Researcher, programmer, and computer security enthusiast interested in learning every day make an impact, think outside of the box, and give back to the Computer Science community.

## Education

### University of Maryland Baltimore County

Maryland, USA

MASTER OF SCIENCE COMPUTER SCIENCE GPA: 3.8

Expected May. 2021

- Practical experience with Qubit (Qiskit) and Annealing based (D-Wave) **Quantum Computing** and applications.
- Quantum Computing projects involved implementing Zoom like meeting platform, virtual background **Image Segmentation**, and experimenting **Feature Selection** in machine learning for *IEEE BigData 2019 Cup* Suspicious Network dataset
- Researching and working closely with **Dr. Anupam Joshi** for the master's thesis. Involved experimenting and extending Adversarial Generative Model using GAN-BiLSTM for **Anomaly Detection**
- Working with Dr. Anupam Joshi as a Research assistant with the **Ebiquity Research Lab**. Working on a Windows Kernel Driver for **Rootkit Detection**

## Work Experience

### VMware

Bellevue, WA, USA

INTERN-MEMBER OF TECHNICAL STAFF

May. 2020 - Aug. 2020

- Extended AWS VM & Region support for cloud-based container life-cycle management platform. Increased business value matrix by **5%**
- **Reduced** user waiting time by **~10 min**. Developed AWS Service Quota verification backend system for container orchestration
- Contributed to various back-end micro-services using GO-lang. Participated in poster and Hackathon competition
- **Tech stack:** AWS, Azure, server-less computing, GO-lang, Python, Docker, Kubernetes, Postgress, ProtoBuff, GraphQL, CI/CD, Jenkins, etc.

### Pratiti Technologies

Pune, MH, India

SOFTWARE ENGINEER

Jun. 2018 - Jul. 2019

- Lead, Contributed, & implemented new back-end micro-services in spring boot, node.js & python for cloud-based IIoT platform.
- Took complete ownership of server-less functions (Azure and AWS) from the on-site team within **~2 weeks** of knowledge transfer
- Designed & adapted **Cloud Agnostic Solution** for the cloud IIoT platform. Devise a solution One code for Azure, AWS, and Alibaba cloud platforms, realized using docker technology
- Researched and implemented **Azure API mock lib** in Node JS. Value-added to company's asset and widely adopted as a mocking library for Azure deployed services in the company's product
- **Tech stack:** Node JS, Spring Boot, Java, Python, Typescript, MySQL, SNS, SQS, RabbitMQ, WebSockets, Docker, Jenkins, Cosmos, Dynamo DB

### Xoriant Solutions pvt. ltd

Pune, MH, India

SOFTWARE ENGINEER

Sep. 2017 - Jun. 2018

- Core member, designed, lead & implemented **Software Development Kit (SDK)** for the communication platform of SAP
- Configured the CI/CD pipeline with docker and shell script to auto-configure docker images for multi-environment deployment
- Implemented Web Authentication filters/logic in API gateway(back-end service) and Nginx load-balancer using OAuth2 - JWT
- Core member of enhanced API version design, implementation, and delivery. Worked with multiple teams
- **Tech stack:** Spring Boot, Docker, Bamboo, Hazelcast, micro-services, Kubernetes, SAP HANA DB, Websockets, Nginx, JWT, OAuth, Swagger

### Great Software Lab

Pune, MH, India

SOFTWARE ENGINEER

May. 2015 - Jul. 2017

- Researched Machine Learning Model for energy optimization & deployed to pilot testing plant resulted in **25% energy savings**.
- Contributed to WebRTC and Vidyo based conferencing, webcast, webinar solutions with screen share and guest joining capability
- Core member for Avaya Snap-In development. Adopted by the company and demoed in various **VoIP conferences**
- **Tech Stack:** IoT, REST, back-end, WebRTC, PHP, Python, NodeJS JQuery, Spring boot, C++, Java, Raspberry pi, sensors, and actuators,

## Additional Contributions & Achievements

- **Country to Country CTF 2020** Participant
- George Mason **CTF Winner** with **Team CyberDawgs**
- NSA CodeBreaker 2019 solved 5 problems
- Contributed to JVM implementation in Rust - **JVM-RS**. Implemented Java Operators parsing and logic. Successfully ran toy Java program
- Implemented **CHIP-8 emulator** from Scratch. Had fun playing those old games again on my laptop
- Contributed to the **azure-function-express** NodeJS library. Implemented logging and resolved bug