



# Bhargavi Poyekar

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## CORE COMPETENCIES

- Competent in Coding, Testing and Debugging. Noteworthy abilities include:
  - Ansible** for Automation of VM Infrastructure and installing libraries.
  - Python** Distributed System for Car Booking.
  - Django** Website for Emotion-based music player with **Object Oriented Programming** and **Computer Vision**.
  - Flask** API for calculating points from a receipt using **Docker** Environment and **SOLID Principles**.
  - Go** and **gRPC** for client-server multi-threaded token manager.
- Certified as **AWS DVA-C02**, **AWS CLF-C02**, and **Terraform Associate (003)**.
- Proficiency in **Javascript**, **React**, **Ajax**, **MySQL**, **Linux**, and **Git** for full stack development and version control.
- Hands-on experience with **TensorFlow**, **PyTorch**, **Machine Learning** and **Computer Vision**.
- Knowledge of **Typescript** and **SDLC** with experience in **Agile** and **Test-Driven Development (TDD)**.
- Exceptional communication, interpersonal & analytical problem solving skills.

## TECHNICAL SKILLS

**Languages and Databases:** Python, Java, C/C++, PHP, Go, JavaScript, SQL, HTML, CSS, MySQL, SQLite, MongoDB.  
**Frameworks:** Django, Django-Rest, Laravel, Selenium, Node.js, React, Flutter, Android Studio, Scikit, TensorFlow.  
**DevOps and Cloud:** Ansible, Terraform, AWS, Docker, Kubernetes, EC2, S3, Lambda, IAM, VPC, Route53, Vault.  
**Others:** GIT, Linux, VSCode, Pytest, Matplotlib, Tableau, jQuery, Pandas, Numpy, Rest API, Ajax, Postman.

## PROFESSIONAL EXPERIENCE

### Systems Security Engineer Intern, University of Maryland Baltimore County Aug 2024 - Present

- Successfully adapted the On System Defender (OSD) application from **Windows** to **Linux** by modifying **C** components to work with **SQL User Defined Functions**, resulting in a functional Linux version comparable to the Windows iteration.
- Designed and implemented **SQL Procedures**, including CRUD operations and stack trace storage, optimizing the application's performance in handling system calls.
- Conducted comprehensive **unit tests** for ported SQL functions, achieving high reliability and performance.

### Software Developer Intern, University of Maryland Baltimore County Jun 2023 - May 2024

- Automated the launch, configuration, and management of **50 Linux virtual machines (VMs)** using **Ansible** and Python Scripts, incorporating SSH-based debugging with jump hosts for seamless connectivity and troubleshooting.
- Established a **Django website** for VM management and employed **Test Driven Development**, featuring a self-signed SSL certificate. Conducted code reviews and created documentation to ensure code quality and maintainability.
- Implemented **Ansible Vault** for secure management of credentials, safeguarding access for over 100 students and faculty using the VM infrastructure.

### Laravel Developer Intern, Origin Cloud Tech Jun 2020 - Aug 2020

- Led development of a **scalable** LMS Platform using the Laravel MVC Framework, resulting in a **increase of 2%** users.
- Strengthened system security with **OAuth2** and **multi-factor authentication**, integrating diverse **REST APIs**, including payment gateways (PayPal, Razorpay), location, and Zoom, increasing website efficiency by **40%**.
- Crafted an appealing user interface using **HTML5**, **CSS3**, **Bootstrap**, and **JavaScript**, perfected organization of database with **well-structured design** and SQL CRUD queries, and reducing query execution time by **10%**.

### Website Developer Intern, Ask in City. Jan 2020 - May 2020

- Boosted user experience and website functionality by designing and implementing new e-commerce features using **HTML**, **JavaScript**, **Ajax**, **SQL** and **PHP**, leading to a **8% increase** in user engagement.
- Adapted to an **agile environment** to optimize project efficiency, contributing to daily **scrum meetings** and fostering cohesive team collaboration, which culminated in a significant **10-day** reduction in project completion time.

## PROJECTS

### HDFS to S3 Data Transfer Application (Python, Hadoop, AWS):

- Developed a **Python** application to automate file transfers from **Hadoop HDFS** to **AWS S3**, reducing manual data handling time by 50%. Integrated Hadoop and AWS **SDKs** for efficient data management and secure operations.
- Tech:** HDFS, S3 Bucket and Policy, Python, boto3, GIT, Linux.

### Image Processing Web Application (Python, Computer Vision, Unit Testing):

- Implemented a **Django**-based web application featuring image processing functionalities. Prioritized **Modular programming** to ensure scalable and maintainable code structure leading to a 30% reduction in codebase complexity.
- Refined code quality with unit testing, and Pylint for static analysis, reducing code review time by 25%.
- Tech:** Django, Python, OpenCV, Matplotlib, Numpy, Pytest, Conda, Pandas, VScode, Jupyter, HTTP.

### Token Manager (Replication, Atomic Semantics, Fail Silent model, Object Oriented Design):

- Developed a **multi-threaded client-server** application for token management with (1, N) replication.
- Deployed a resilient **read-impose-write-all** protocol, ensuring accurate maintenance of token state information and fail silent behavior for server nodes resulting in a 95% up time.
- Tech:** Golang, gRPC, Google Protocol Buffer, SHA-256, socket programming, Mutex, Multithreading.

## EDUCATION

University of Maryland, Baltimore County - Baltimore, MD | MS in Computer Science | GPA: 3.85/4.0  
Sardar Patel Institute of Technology, Mumbai, India | B.Tech in Computer Engineering | GPA: 4.0/4.0

Aug 2022 - May 2024  
Aug 2018 - May 2022