Bhargavi Poyekar

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CORE COMPETENCIES

- Competent in coding, testing and debugging. Noteworthy abilities include:
  - **Ansible and Terraform** for automation of infrastructure deployment and management. ⭘
  - **Python** Distributed System for Car booking. ⭘
  - **Flask** API for calculating points from a receipt using **Docker** environment and **Github Actions**. ⭘
  - **Go and gRPC** for client-server multithreaded 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 **Pandas, Numpy, Scipy, and machine learning algorithms**.
- Knowledge of **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 deployment, configuration, and management of **50 Linux virtual machines (VMs)** using **Ansible** and Python scripts, integrating **SSH hardening, key-based authentication**, and **jump hosts** for secure remote access.
- Developed a **secure Django-based VM management platform**, implementing **role-based access control (RBAC)**, **SSL/TLS encryption**, and **secure session management** to prevent unauthorized access.
- Implemented **Ansible Vault** for secure credential storage, encrypting sensitive data and ensuring controlled 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 an **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**, designed a database with **normalized** tables, **multi-table joins**, and optimized **SQL CRUD** queries, reducing query execution time by **10%**.

PROJECTS

HDFS to S3 Secure 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%. Implemented **IAM policies, data integrity verification, and encryption**. Integrated **AWS KMS** to encrypt files both in transit and at rest.
- Enhanced security by using **AWS Secrets Manager** to store and rotate sensitive credentials like AWS access keys, replacing environment variables. Integrated **Amazon CloudWatch** to monitor file transfers, track errors, and log performance metrics. Configured **Amazon SNS** to send email notifications for transfer status updates (success/failure).
- **Tech: HDFS, S3 Bucket, IAM Roles, Encryption, Python, boto3, GIT, Linux, CloudWatch, SNS.**

Flask API for Receipt Processing (Containerized, Scalable Deployment, SOLID Principles):
- Developed a **Flask-based API** for calculating reward points, using **Docker** to ensure consistency across environments.
- Implemented **API testing** using **Postman**, automating tests for different API endpoints. Integrated continuous testing into **GitHub Actions** for automated deployment and validation.
- **Tech: Python, Flask, JSON, Docker, Docker Compose, Postman, GitHub Actions, Pytest.**

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	Aug 2022 - May 2024
Sardar Patel Institute of Technology, Mumbai, India | B.Tech in Computer Engineering | GPA: 9.4/10	Aug 2018 - May 2022