

SIDDHESH KOCHAREKAR

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EDUCATION

The George Washington University

Master of Science, Computer Science (GPA: 3.6/4.0)

The George Washington University SEAS Dean's Award

Washington, DC

Aug 2023 - May 2025

SKILLS

Programming languages and Web technologies: Python, Java, VB.NET, JavaScript, Shell scripting, HTML, CSS, React

Database management and tools: MySQL, IBM DB2, Oracle Database, MongoDB

Tools and Operating systems: Git, GitHub, GitLab, Markdown, JSON, XML, GNU/Linux, Windows

Frameworks and Container technologies: Spring Boot, Flask, .NET, Kubernetes, Docker, Nginx

WORK EXPERIENCE

Tata Consultancy Services Ltd.

Mumbai

Software Developer

Nov 2022 - Jun 2023

- Collaborated with development and operations teams to deploy **8** major application upgrades and resolve **~200** client-reported issues, and maintained application reliability and supported critical workflows for over **2000** branches.
- Partnered with cross-functional teams to identify and fix memory bottlenecks in third-party software, which optimized the legacy VB.NET codebase for a **10x** increase in application processing speed.
- Optimized code for a network-attached storage module, reduced processing load, and achieved a **30x** reduction in overall file transfer time.

Junior Software Developer

Oct 2020 - Oct 2022

- Drafted a VB.NET prototype for automated batch processing of financial documents into PDFs, which reduced manual user intervention by **60%** and improved overall operational efficiency.
- Implemented improved logging and monitoring for the application, which reduced troubleshooting time by over **40%** through faster identification of performance bottlenecks and system errors.

PROJECTS

Wildfire Monitoring System

Feb 2025 - May 2025

- Designed a distributed anomaly detection system using Kafka, Flask (Python), Docker, and Kubernetes, which handled **200–300** requests/sec from **~400** concurrent users simulated with Locust, and integrated real-time geospatial mapping of hazard intensity.
- Minimized API Gateway latency by **95%** by implementing Kafka producer batching, asynchronous writes, and removing blocking flush logic, with a deliberate tradeoff favoring throughput over delivery guarantees.

Video Converter Microservice

Sep 2024 - Nov 2024

- Provisioned and managed a scalable microservices application using Minikube (Kubernetes.) Implemented services for authentication, video-to-audio conversion, and notifications.
- Developed JWT-based authentication and message-driven processing using RabbitMQ queues to handle video processing requests asynchronously, which optimized workload distribution across microservices.

Content Management System

Jul 2024 - Oct 2024

- Built a blog application with a user authentication system using Flask-Login, Flask-Forms, and Bcrypt, which enabled secure session management and included checks to restrict access to sensitive URLs.
- Improved UI reusability and performance by leveraging Jinja2 template inheritance for shared components, and reduced HTML duplication by **~60%** across 7–8 views built on a shared base template.
- Hosted the application on a Linux server with Nginx and Gunicorn and configured reverse proxy and process management for reliable and maintainable production access.