Adham Popal

Ashburn, VA | (703) 505-4245 | www.linkedin.com/in/adhamp | apopal23@gwu.edu

EDUCATION

University	George Washington University
Major: Computer Science	*Graduation Date: May 2024*

- 3.94 GPA
- Applicable Coursework Completed: Data Structures & Algorithms, Comp. Architecture, Database Systems, Systems Programming, Operating Systems, Comp. Networks, Distributed Systems, Machine Learning, Data Analytics
- Skills: Java, Python, C, Golang, SQL, MongoDB, HTML+CSS, Git+Github, Docker

WORK EXPERIENCE

Airlines Reporting Corporation	Arlington, VA
Software Engineer Intern	*June 2023-August 2023*

- CI/CD Modernization: Spearheaded the migration from Jenkins to GitLab CI/CD, enhancing the delivery process for ticketing authority systems
- Scalable Backend Solutions: Implemented an API gateway and AWS Lambda, enabling dynamic updates and additions to the ticketing carriers table in DynamoDB
- Infrastructure Automation: Leveraged Terraform for end-to-end AWS infrastructure deployment for ticketing authority, emphasizing Infrastructure as Code (IaC) best practices
- Legacy Codebase Enhancement: Played a key role in modernizing software by refining and upgrading legacy Nest.js components, ensuring system robustness
- AI Integration & Presentation: Orchestrated a comprehensive capstone presentation at ARC, highlighting practical AI applications, strategic integration points, and showcasing dependable use cases

REI Systems	Sterling, VA
Software Developer Intern	*May 2022-August 2022*

- Data Pipeline Development: Conceptualized and built a Real-Time Data Pipeline crucial for the evaluation of an ML-powered Search Engine.
- Agile Workflow Participation: Actively collaborated in Agile ceremonies like daily standups, sprint planning, and weekly demonstrations, fostering iterative development.
- Performance Metrics Design: Innovated metrics to evaluate Search Engine precision, culminating in data-driven insights for system refinement.
- Cloud Infrastructure Management: Orchestrated AWS MSK Cluster and CloudWatch streams, integrating foundational cloud computing principles for enhanced data flow.
- Backend Application Development: Developed Java Spring applications for real-time data transformation from AWS CloudWatch to AWS MSK and efficient data storage in S3.
- Data Extraction & Analysis: Utilized AWS Glue for intricate data extraction, performed computational analyses, and streamlined data storage into DynamoDB.

George Washington School of Engineering and Applied Science	Washington D.C.
Undergraduate Learning Assistant (Operating Systems)	*August 2023 – December 2023*

- Student Engagement & Support: Hosted weekly office hours, offering students intricate conceptual clarifications and assisting with code reviews.
- Lab Instruction: Supervised labs, ensuring students comprehended materials and promptly addressed academic inquiries, enriching the learning experience.
- Course Management: Collaborated closely with professors on class structuring, simultaneously tracking and updating student progress metrics to facilitate efficient teaching strategies.

PROJECTS

Online Portfolio: https://adham23p.github.io/

Straggler Mitigation for Distributed Architecture (Python): Distributed ML training using PyTorch and Ring-Allreduce architecture

Debate Winner Prediction (Python): Machine learning project which achieved final 78% accuracy in prediction of the winner of APDA debates

Microkernel Containers (C): Implementation of containers in xv6 (microkernel operating system).

University Registration-Advising (Python+Flask, HTML+CSS, mySQL): University System that maintains student records and assigned faculty advisors