

# ADAM KHALAF

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## EDUCATION

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### University of Maryland

College Park, MD

*Bachelor of Science, Computer Engineering*

Aug 2021 - Dec 2023

- Data Structures and Algorithms, Computer and Network Security, Operating Systems, Distributed Systems
- Dean's List, A. James Clark Scholarship

## EXPERIENCE

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### Peraton

Herndon, VA

*Software Engineer, Associate*

Jan 2024 - Oct 2024

- Spearheaded the development of a global intelligence system and facilitated standup meetings as Scrum master
- Refactored scalable data collection pipelines using Python and Pandas to efficiently upload data to S3 and a PostgreSQL database, achieving a 62% reduction in processing time
- Designed and implemented a GraphQL API using Django, integrated with a PostgreSQL database (RDS), enabling users to efficiently retrieve complex datasets
- Developed a GitLab CI pipeline to automate the build, test, and deployment process of the application on AWS, reducing deployment time by 45% and minimizing manual errors
- Mentored new hires and interns, streamlining initial contributions and their integration into the team
- Demonstrated new features and key insights to team and stakeholders in Agile biweekly iteration demos

### Peraton

Reston, VA

*Software Engineer, Intern*

Jun 2023 - Aug 2023

- Developed and maintained a satellite and ground asset scheduling application using the Spring Framework
- Designed and implemented a RESTful API using Spring Boot, integrated with a PostgreSQL database, enabling users to easily retrieve and manipulate data on mission-critical assets
- Containerized backend services using Docker, streamlining deployment processes and ensuring consistency across various virtual environments, reducing setup time by 80%
- Presented final deliverables to the team and stakeholders, effectively communicating technical details and project impact

### University of Maryland

College Park, MD

*Undergraduate Research Assistant*

Jun 2022 - Aug 2022

- Developed a data collection tool using Python and Wireshark to instantiate EC2 servers and collect network traffic to identify VPN servers
- Analyzed network traffic using Wireshark and Pandas, extracting insights to enhance VPN detection accuracy
- Implemented CI/CD pipelines, automating build, test, and deployment processes, improving development cycle times by 20%
- Presented a comprehensive report of findings to fellow researchers, articulating the methodology, results, and implications, which facilitated informed discussions and further research directions

## PERSONAL PROJECTS

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### Dunkin' Donuts Nutrition API

- Developed a RESTful API using FastAPI to provide programmatic access to Dunkin Donuts' nutritional information, transforming data from a hard-to-use PDF into a searchable, structured format
- Implemented an in-memory data solution to efficiently serve nutritional data requests, eliminating the need for database dependencies
- Utilized Pydantic models to validate and serialize data, ensuring robust data handling throughout the API
- Improved data accessibility by allowing users to search for nutritional information programmatically, enhancing usability over the original PDF

## SKILLS & CERTIFICATIONS

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**Languages:** Java, Python, TypeScript, C, OCaml, Ruby, Rust, SQL (PostgreSQL)

**Technologies:** Git, Linux, Docker, GitLab CI/CD, GitHub Actions, Django, Spring, REST, GraphQL, AWS (EC2, S3, Lambda, ECS, RDS, SSM)

**Certifications:** AWS Certified Cloud Practitioner