

Alexander Winkler

awinkler.dev | Alexwinkler1@icloud.com | [linkedin.com/in/alexwinklerr](https://www.linkedin.com/in/alexwinklerr)

Education

Georgia Institute of Technology

Master of Science in Computer Science

Jan. 2026 – Dec. 2027

Atlanta, GA

Eastern Florida State College

Bachelor of Applied Science in Software Development (Deg GPA: 4.0)

May 2021 – Aug. 2025

Melbourne, FL

Experience

Cloud Architecture Intern

Georgia Technology Authority

Jun. 2026 – Aug. 2026

Atlanta, GA

- Designed and audited enterprise cloud architectures, integrating **AWS** identity management and **Azure** active directory patterns to secure multi-tenant state agency infrastructures.
- Built and tested localized **Docker** environments to simulate cross-cloud API communications, identifying resource bottlenecks prior to production staging.
- Collaborated on hybrid-cloud migration frameworks, establishing compliance, cost-optimization, and scalability baselines for legacy transitions to **AWS**.

Teaching Assistant – Android App Development

Eastern Florida State College

Jan. 2025 – May 2025

Melbourne, FL

- Mentored students through **8+** complex Android projects, providing technical code reviews and debugging support in **Kotlin** and **Java**.

Police Officer

City of Rockledge

Jan. 2022 – Jan. 2023

Rockledge, FL

- Operated in high-pressure field situations requiring clear communication, situational awareness, and accurate report writing

Certifications

AWS Certified Cloud Practitioner – *Active (Issued June 2026)*

AWS Certified Solutions Architect – Associate – *In Progress (Expected July 2026)*

AWS Certified Developer – Associate – *In Progress (Expected July 2026)*

AWS Certified Security – Specialty – *In Progress (Expected August 2026)*

Projects

Amazon Enterprise Security Analytics Engine | *DynamoDB, Lambda, API Gateway, S3, Cognito*, Python [Link](#)

- Architected a scalable cloud analysis pipeline to evaluate data exposure risks across a **1.2M+ record dataset**, mapping user directory details to identify vulnerabilities against targeted social engineering.
- Refactored backend ingestion frameworks to stream threat intelligence files via **Amazon S3** into **Amazon DynamoDB**, modeling Global Secondary Indexes (GSIs) for optimized, single-digit millisecond query latencies.
- Integrated **Amazon Cognito** user pools to enforce secure token validation, implementing strict access controls to prevent automated scraper execution across serverless API endpoints.

Ranking Algorithm Integrity Framework (Zillow Audit) | *Python, Next.js*

[Link](#)

- Reverse-engineered engagement-based ranking systems to identify logic flaws in automated verification and rate-limiting controls.
- Designed and executed a high-concurrency behavioral test that accelerated property visibility from **2 to 450+ views**, analyzing synthetic interaction thresholds to audit **"Hot Home"** algorithmic triggers.
- Published a **10-page technical research paper** detailing system vulnerabilities and architecting defensive mitigations against engagement fraud.

Technical Skills

Languages: Python, Java, C++, SQL, JavaScript, Kotlin, HTML/CSS

Cloud & DevOps: AWS (DynamoDB, S3, Cognito, RDS), Google Cloud Platform, Docker, Vercel, Git

Data & Backend: PySpark, Databricks, FastAPI, MySQL, SQLite

Frameworks & Tools: React, Next.js, Android Studio, BeautifulSoup, PlantUML, Bruno