

# Anthony D'Andrea

Software Engineer

New York, NY

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## PROFESSIONAL EXPERIENCE

### Amazon Web Services – New York, NY

Software Development Engineer II (Oct 2022 – Present)

Software Development Engineer (Feb 2021 – Oct 2022)

- Contributed to the successful delivery of the AWS GuardDuty Runtime Threat Detection Agent, which was announced at re:Invent 2022
  - Designed and built a critical service for tracking the aliveness of agents and billing customers accordingly
  - Designed and built a backend service for metrics ingestion and dashboarding to ensure operational readiness
  - Led a team of 4 engineers in the metrics collection and end-to-end strategy, efficiently getting data from agents into the metrics service
- Led the requirement gathering and system design of an automated malware collection and analysis platform
  - Collaborated with cross-functional teams to disambiguate the microservices architecture, resulting in a highly scalable and secure system that supports multiple organizational use cases.
  - Delivered the Sample Ingestion service, an extensible ECS service that ingests files from different sources.
  - Led design and implementation of Feature Extraction Service and its development framework to allow researchers to easily add feature extractors to analyze datasets and develop ML models
- Rapidly onboarded to adjacent team's project and built out the Blue/Green deployment infrastructure for an internal GuardDuty API averaging ~76k TPS, delivered on time for GA deadline
- Technologies used: Rust, Python, Typescript, CI/CD, SQS, Fargate, Lambda, EC2, S3, CloudWatch, EFS, DynamoDB, Firehose, CDK, Git, AWS SDK, IAM, SecretsManager, AppConfig

Software Development Engineer Intern (June 2020 – Aug 2020)

- Designed, implemented, and integrated an internal library for determining the operational states of ~100,000 links/month to block testing on active links in the network
- Phased in rollout to silently capture metrics of runtimes to ensure additional latencies were non-disruptive for customer use-cases
- Filtering feature deployed to production and has received positive recognition from customers for keeping AWS network safe by blocking roughly ~3500 dangerous executions per month
- Technologies used: Python, Internal CI/CD, Internal metrics platform, Git

## EDUCATION

### University of Connecticut (Storrs, CT)

**Bachelor of Science in Computer Science, May 2020**

- Concentration:** Machine Learning Engineering
- Coursework:** Data Structures, Algorithms, Big Data Analytics, Deep Learning and Neural Networks, C++ Essentials, Software Engineering, Concurrent Programming

**Bachelor of Arts in Applied Mathematics, Dec 2020**

- Coursework:** Probability, Linear Algebra, Differential Equations, Partial Differential Equations, Statistical Methods, Markov Processes, Calculus

## ADDITIONAL SKILLS

- Languages:** Rust, Python, Java, Typescript, Javascript, Bash
- Technical Skills:** Distributed Systems, Infrastructure As Code, AWS, Docker, CICD, Git, Shell Scripting, System Design, Scalable Architecture, Linux, Containers, APIs, Swagger, Event-Driven Architecture
- Soft Skills:** Cross-Functional Collaboration, Consensus Building, Dealing with Ambiguity, Active Communication, Leadership