

# Luke Sirand

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## Summary

Software engineer with hands-on experience in AI integration, cloud computing, and ML development. Proven track record of optimizing classification speed and scaling ML workflows in collaboration with ML teams. Passionate about security, automation, and innovative problem-solving.

## Work Experience

### Senior Software Engineer - OpenText, San Diego (Remote)

January 2025 - Present

- Build C++ DLP library integrating LibTorch and SentencePiece for the vectorization, tokenization, and classification of web traffic, in close collaboration with ML teams.
- Optimize feature vectorization, improving AI classification speed by 50%.
- Enable Python/C++ interoperability using pybind11, improving ML workflows.
- Architect end-to-end ML delivery pipeline with RESTful API (Flask, MySQL), hosted on AWS ECS with Redis and ALB, processing thousands of req/min.
- Create .NET 8 CLI tools for managing model lifecycle and deployments.
- Lead security, CloudWatch, and CI/CD efforts, achieving 100% new and 75% legacy product compliance.

### Software Engineer II - OpenText, San Diego (Remote)

April 2022 - January 2025

- Delivered POC for ML training data labeling using byte manipulation, checksum analysis, and mitmproxy.
- Designed system for collecting, normalizing, and publishing icons for 10,000+ applications daily; automated refresh pipeline using OpenCV and scrapers (e.g. detecting Twitter's rebranding to X).
- Reduced cloud infrastructure costs by improving content classification build generators and collection tools handling millions of URLs/IPs.

### Software Engineer I - OpenText, San Diego (Remote)

July 2021 - April 2022

- Developed scraping framework that expanded domain coverage by 500% through automated discovery of app subdomains;
- Scaled infrastructure using AWS (RDS, Lambda, SQS, EC2, S3), Docker, Python, Node, Rust, and C#.

### Software Developer Intern - OpenText, San Diego (Remote)

September 2020 - June 2021

- Developed test automation suite with Selenium, PyTest, and Allure for CASB platform.

### Instructional Assistant - Computer Science and Engineering Department, UCSD

December 2020 - June 2021

- Built Discord bot (Node.js, Heroku) for detecting academic integrity violations.
- Run labs in Git, C/C++, Java, Python, and Linux environments.

## Education

### B.S. in Mathematics and Computer Science - University of California, San Diego

September 2017 - June 2021

- Provost Honors recipient. NCAA Men's Epee athlete and Junior Olympics top 64 finisher.

## Projects

### Personal Project - DupeLs (<https://github.com/sirandluke/dupels>)

- Created a Rust CLI tool to detect duplicate files via checksum analysis in nested directories.

## Skills

Languages: Python, C#, JavaScript, C++, Rust, SQL

Frameworks/Tools: .NET, Flask, Node.js, React, Selenium, PyTorch, mitmproxy, OpenCV, Jupyter, Git

Cloud & DevOps: AWS (EC2, ECS, Lambda, RDS, S3, ElastiCache, CloudWatch, SQS), Docker, Redis, CI/CD, GitLab

Databases: MySQL, DynamoDB

Other: REST APIs, Unit Testing Linux (Ubuntu, Debian, Alpine), Threat Modeling, SCA, DAST, Container Security