Zachary Kuptsow

Philadelphia, PA zkups56@gmail.com (856) 685-9908 in linkedin.com/in/zack-kuptsow

SUMMARY

Full stack software engineer with a master's in cybersecurity and six years of experience building secure, scalable web applications at early-stage startups. At Teampay, a fintech platform, contributed to systems that simplified corporate spending, while at DrayNow, a logistics tech company, developed tools that optimized freight visibility and carrier workflows. Known for balancing ownership with collaboration, thrives in agile teams where code quality, intentional architecture, and continuous improvement are core values.

WORK EXPERIENCE

DrayNow (Conshohocken, PA)

Software Engineer July 2024 - present

- Drive backend development using Node.js, TypeScript, and PostgreSQL across seven microservices, supporting a logistics platform running on AWS infrastructure (Lambda, SQS, SNS, S3, ECS) with CDK-managed resources.
- Led a major upgrade initiative, updating Node.js environments from v16 to v22 and elevating over 20 major dependencies across services. Conducted rigorous testing in a copy environment to ensure zero downtime, resulting in improved security posture and a 15% gain in service performance.
- Contributed to frontend modernization by converting legacy class-based React components into modular functional components with hooks, and supported backend-rendered SSR flows for web and mobile platforms to streamline dynamic content delivery.
- Created new GitHub Actions CI workflows to introduce automated test coverage reporting and enforce cohesive linting standards; championed the adoption of docstrings and code quality improvements across all backend services.
- Modernized legacy systems by refactoring low-quality, high-risk code—reducing technical debt and improving debugging efficiency through expanded DataDog logging and tighter monitoring on customer-facing services.
- Support event-driven architecture with SNS/SQS, contributing to the development and refinement of message flows to improve system responsiveness and operational transparency.
- Participate in weekly on-call rotations, using DataDog to triage issues and maintain reliability across a 13-service architecture; actively contribute to internal tooling for better support coverage.
- Review 3-5 pull requests weekly, collaborating with a distributed team across the U.S. and Romania to maintain code integrity, support frontend/mid-tier integrations, and promote best practices.

Teampay (Remote - New York, NY)

Software Engineer (promoted from Customer Support Engineer) September 2021 - February 2024

- Developed intuitive user interfaces using React, TypeScript, and Tailwind CSS to support dynamic B2B expense management workflows and enhance user experience across web platforms.
- Built and maintained RESTful APIs supporting high-volume financial transactions using Python, Django, and PostgreSQL in a monolithic architecture, improving platform reliability and accelerating feature delivery.
- Delivered full stack solutions while acting as a technical liaison with support, reducing issue resolution times and ensuring smoother weekly feature rollouts.
- Spearheaded the Group Approval refactor and Forest service revamp, cutting engineering escalations from 24% to 7% by improving reliability and modularity.

- Implemented cross-functional features such as vendor portal workflows, SAML/SCIM integrations, and multi-line card logic, enhancing security, compliance, and user automation.
- Independently resolved hundreds of escalated production issues using Bash and Django shell in Dockerized environments, owning customer support engineering and improving issue resolution workflows.
- Managed release workflows with Git and GitHub Actions, coordinating versioning and deployments to ensure stable weekly releases with minimal regressions.

Qlik (King of Prussia, PA)

Security Intern December 2019 - June 2020

- Designed and implemented a full stack anomaly detection system to monitor network behavior and enhance internal security visibility. The tool ingested over 250,000 NetFlow data points per hour from Scrutinizer's API.
- Built a Django-based transformation layer and hosted it on Azure to parse, enrich, and visualize network metrics such as IP traffic volumes, request patterns, and source-destination pairings.
- Integrated the processed data with Qlik Sense Cloud, enabling dynamic dashboards for real-time security insights and anomaly detection across internal infrastructure.
- Supported the security team with AWS key rotation and internal audit preparation, reinforcing best practices in secure access and operational compliance.

EDUCATION

University of Delaware

Master of Science - Cybersecurity

August 2019 - June 2021

Concentration: Secure Software

Bachelor of Electrical Engineering

August 2015 - June 2019 Minor: Integrated Design

Relevant Coursework

- Cloud Computing Security Engineered a robust cloud orchestration web application on Google Cloud Platform, focusing on stringent security protocols and best practices to ensure a secure and efficient cloud computing environment.
- **System Hardening and Protection** Acquired expertise in advanced system hardening techniques and protective measures, utilizing a suite of tools for defect management, configuration hardening, account control, and comprehensive logs/auditing. Enhanced skills in conducting detailed risk assessments to fortify system security.
- **Secure Software Design** Mastered secure software design by both implementing and countering OWASP Top 10 exploits in C++ and analyzing threats in assembly language, ensuring comprehensive application security.

SKILLS

Languages & Frameworks

- Python
- Typescript / Javascript
- Django
- Node
- React
- SQL / PostgreSQL
- Redux
- HTML / CSS
- Tailwind
- Rust

Infrastructure & Tooling

- Docker
- AWS
- CDK
- Git / Github Actions
- CI / CD
- LaunchDarkly
- DataDog
- Ruff / ESLint / Prettier
- Bash / Shell Scripting
- Jira

Practices & Systems

- Secure Software Development
- Web Security
- Testing Frameworks and Automation
- Logging and Monitoring
- Design Patterns
- Documentation Standards
- Agile Development
- On-Call Support