Micah Dumont

Principal Software Engineer | micahedumont@gmail.com | Carrollton, US

Summary

Senior Security Analyst with extensive experience in developing and securing cloud applications, designing enterprise-level cloud solutions, and architecting robust, secure cloud infrastructures. Proven track record of driving high-impact projects, mentoring teams, and delivering scalable security solutions. Eager to leverage my senior-level expertise in a challenging, full-time Senior Software Developer role, with a focus on leading innovative software development initiatives.

Skills

- **Web Development**: HTML5, CSS3, JavaScript, TypeScript, React, Node.js, RESTful APIs, GraphQL, Webpack, JQuery, Microservices, Responsive Design, Bootstrap, React, Angular, GraphQL
- **Software Testing**: Test-Driven Development (TDD), Behavior-Driven Development (BDD), Mocha, Selenium, Chai, Test Automation, API Testing, Unit Testing, Integration Testing, Continuous Integration (CI), Continuous Delivery (CD), Code Coverage, Postman
- **Software Documentation**: API Documentation, Markdown, Swagger, Automated Documentation, Technical Writing, Confluence, User Guides, System Design Documentation, High-Level Design (HLD), Low-Level Design (LLD)
- **Backend Development**: Python, Go (Golang), Java, C/C++, Node.js, RESTful APIs, Microservices, gRPC, GraphQL, Docker, Kubernetes, Serverless Architecture, JWT Authentication, OAuth2, Machine Learning (ML), AI Training, Ruby on Rails
- **Data Management**: SQL, NoSQL, MySQL, PostgreSQL, MongoDB, Redis, Elasticsearch, Database Design, Query Optimization, Indexing, Replication, Sharding
- **DevOps & CI/CD**: Jenkins, GitLab CI, GitHub Actions, Docker, Kubernetes, Terraform, Puppet, Chef, AWS CodePipeline, Automated Deployments, Infrastructure as Code (IaC), Containerization, CloudFormation
- **Cloud Services**: AWS, Azure, Google Cloud Platform (GCP), AWS EC2, AWS Lambda, AWS S3, AWS ECS, AWS SQS, AWS SNS, AWS CloudWatch, Kubernetes, Serverless Computing, Cloud Storage, DevOps, VPC, IAM
- **Version Control**: Git, GitHub, GitLab, Bitbucket, Version Control, Branching Strategies, Pull Requests, Code Review, Agile Methodology, Scrum, Kanban, JIRA, Confluence, ZenHub
- **Task Management**: JIRA, Asana, Slack, Microsoft Teams, ZenHub, Confluence, GitHub Projects, Azure DevOps, Team Collaboration
- **Security**: OAuth2, JWT, SSO (Single Sign-On), mTLS, Encryption, SSL/TLS, Security Audits, Penetration Testing, Vulnerability Assessment, OWASP, IAM, RBAC, Access Control, Data Protection
- **Infrastructure & Virtualization**: Docker, VMware, VirtualBox, AWS EC2, Azure Virtual Machines, Kubernetes, Vagrant, Infrastructure as Code (IaC), Terraform, CloudFormation

Work Experience

Toyota Motor Company North America   Feb 2022 — Present
Senior Security Analyst
- Designed and implemented robust cryptographic libraries and APIs using Golang, supporting secure vehicle-to-cloud communications for the Toyota 2024 and 2021 vehicle models, ensuring data integrity and confidentiality.
- Architected and developed scalable microservices and REST APIs for cryptographic signing, encryption, and decryption in cloud-based vehicle software updates, integrating multiple cipher suites and algorithms like AES, ECIES, and RSA.
- Led the design and implementation of Plug and Charge (PnC) services for electric vehicles, enabling secure enrollment and payment automation through cryptographic certificates, Golang-based microservices, and AWS SNS.
- Engineered secure boot services for automotive units, utilizing a combination of Golang microservices, AWS Lambda, and HSM-based encryption, ensuring data security for vehicle ECUs.
- Automated testing workflows using Python and CI/CD pipelines (GitHub Actions, SonarQube, Terraform), improving system reliability and regression testing coverage.
- Mentored junior engineers on secure coding practices and best practices for backend systems, ensuring high code quality and adherence to Golang coding standards across the team.
- Created a signing service that facilitated Microsoft Authenticode signing of software packages running in a Linux Docker container, utilizing an on-premises Hardware Security Module (HSM).
- Developed and maintained comprehensive development and architectural documentation, including sequence diagrams, C1-C4 architecture data flow models, high-level diagrams, and software.
- Implemented advanced encryption algorithms including Galois Counter Mode (GCM) and Cipher Block Chaining (CBC) to secure sensitive data, ensuring robust encryption with integrity and confidentiality in high-performance cloud and automotive applications.
- Provided support for ECDSA, HMAC, CMAC, RSA, and Ed25519 signing algorithms to be utilized by either our cloud HSM, native HSM, or local signing implementations.
- Developed automated tools to streamline the creation and management of signed certificate chains for mTLS (mutual TLS) connections, enhancing security and reducing manual intervention in certificate lifecycle management.
- Engineered and deployed mTLS 1.3 server connections for Plug and Charge (PnC) and additional projects, enhancing secure communication between systems and ensuring data integrity and confidentiality across cloud and vehicle environments.
- Wrote and distributed our team's Golang coding standards document.

Toyota Motor Company North America   Oct 2019 — Feb 2022
Back-End Python Developer
- Developed cloud-native backend services using AWS Lambda for secure, automated data flow between internal systems (e.g., importing vulnerability reports and Jira integration).
- Implemented automated workflows for security vulnerability management, leveraging AWS services (S3, Lambda, SNS) and Python, enabling streamlined remediation across various platforms.
- Developed an AWS service responsible for updating sharepoint permissions of vulnerability remediation cases based upon a jira workflow
- Collaborated in the design and architecture of a Test Automation Platform (TAP), ensuring end-to-end testing automation of vehicle systems in a cloud environment with integration into CI/CD processes.
- Contributed to the development of Toyota's 2021 cryptographic libraries and cybersecurity suites, enhancing the protection of ECU software through the implementation of robust encryption and security protocols, ensuring integrity and resilience against cyber threats.

5Ms Mineral Management   Aug 2016 — Aug 2019
Full Stack Developer
- Developed and maintained backend services using Python and SQL databases to automate the mineral management process, improving system performance and data reliability.
- Led full-stack development of an alert system, designing both the frontend and backend, to deliver real-time notifications based on customizable business metrics and rules, utilizing SQL and Python for seamless data processing and user interface interaction.
- Optimized SQL queries and indexes for faster data retrieval, improving system efficiency and reducing server load.
- Designed and developed a comprehensive Content Management System (CMS), enabling efficient content creation, management, and distribution with a focus on scalability, user experience, and security.
- Ensured adherence to stringent security standards for the Mineralware application, successfully driving efforts that led to the system passing a SOC-2 security audit and maintaining compliance with industry best practices for data security.
- Optimized and enhanced existing GIS architecture, implementing improvements that increased performance, scalability, and data accuracy for geospatial analysis and decision-making processes.

University of Texas at Arlington   Aug 2013 — Jul 2016
Web Specialist
- Created interactive, user-friendly HTML documentation and developed a comprehensive suite of automated tests for all existing front-end interfaces, ensuring seamless functionality and improved user experience.
- Designed and implemented a robust testing framework using Chai-as-promised for assertion chaining, Selenium for headless browser testing, and WebDriver for full browser automation, enhancing test reliability and efficiency.
- Developed responsive internal applications using Bootstrap, incorporating modern design principles to ensure optimal performance and user experience across a wide range of devices.
- Built custom in-house tools to automatically generate insightful metrics for various database tables, enabling data-driven decision-making and enhancing overall system monitoring.

University of Texas at Arlington   May 2016 — Jul 2016
Lecturer and Teacher
- Consistently received high ratings from students, demonstrating effective teaching methods and strong engagement with course content.
- Developed custom, interactive course websites tailored to student needs, enhancing learning experiences and streamlining course management.
- Introduced students to real-world software development practices, fostering hands-on experience with modern development tools and methodologies.
- Designed and developed multiple prototype websites, providing students with practical exposure to web development and agile project workflows.
- Taught workshop-style classes focused on workforce development, covering key topics such as browser-client communication and modern web standards.
- Provided in-depth instruction on HTML5 and CSS3, helping students build responsive, user-friendly web applications.
- Introduced students to database communication techniques, emphasizing effective interaction between front-end applications and backend databases.
- Delivered comprehensive lessons on Java-based server programming, equipping students with essential skills for backend development in enterprise environments.

Education

University of Texas at Arlington
B.S. in Computer Science

Arlington, TX
Jan 2013 — Dec 2016

Profiles

LinkedIn
Micah Dumont

linkedin.com/in/micahdumont