

Luke Encrapera

AI Engineer | Security & Identity Architect | Founder @ AI & Sons

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PROFESSIONAL SUMMARY

AI engineer, security architect, and founder with deep experience building intelligent systems, secure automation, and enterprise identity architecture across startup and large-scale corporate environments. Founder of AI & Sons, an AI security and engineering consulting company focused on building AI-native applications, multimodal systems, secure automation platforms, and privacy-conscious software solutions. Develop AI applications daily using modern LLM ecosystems, cloud-native infrastructure, and agent-assisted workflows across a wide range of tools and providers. Backed by over 6 years of enterprise experience designing and automating identity infrastructure across Microsoft Entra ID, Active Directory, Microsoft Identity Manager, and Delinea Secret Server. Proven track record leading RBAC architecture, engineering identity workflows at enterprise scale, and implementing security-first automation that improves resilience, governance, and operational efficiency. Tool-agnostic and comfortable operating across rapidly evolving AI platforms, selecting the best models, frameworks, and development environments for each use case rather than relying on a single vendor stack.

CORE TECHNICAL SKILLS

AI Engineering: LLM Integration, Prompt Engineering, Retrieval Augmented Generation (RAG), Multimodal AI Applications, Computer Vision, Agentic Workflows, AI Automation Systems, AI-Assisted Development

Software Engineering: JavaScript, TypeScript, Node.js, Python, PHP, REST APIs, Full-Stack Development

Cloud, DevOps & Infrastructure: Google Cloud Platform, Azure, AWS, Firebase, Vercel, Docker, NGINX, GitHub Actions, CI/CD Pipelines, Playwright

Security & Architecture: Application Security, Identity & Access Management (IAM), Privileged Access Management (PAM), Role-Based Access Control (RBAC), Zero Trust Architecture, Microsoft Graph API, Penetration Testing Concepts

Identity Platforms: Microsoft Entra ID, Active Directory, Microsoft Identity Manager (MIM), Delinea Secret Server, Exchange, ServiceNow, Workday

PROFESSIONAL EXPERIENCE

Founder & Lead AI Software Engineer

July 2025 - Present | Remote

AI & Sons

Founded an AI security and engineering consulting company focused on building AI-native applications, multimodal systems, secure automation platforms, and privacy-conscious software solutions.

Design and deploy full-stack AI applications integrating modern LLM ecosystems, computer vision pipelines, cloud-native infrastructure, and agent-assisted engineering workflows. Develop across a broad AI tooling landscape and select platforms based on architecture and business need rather than vendor preference.

Key Contributions

- Architect and launch AI-powered applications spanning accessibility, computer vision, experimentation, and consumer utility use cases.
- Build multimodal systems combining visual recognition, LLM reasoning, workflow automation, and modern frontend experiences.
- Develop and deploy full-stack applications using JavaScript, TypeScript, Node.js, Firebase, Vercel, Docker, GCP, Azure, and AWS services including Bedrock.
- Perform AI security auditing and engineering consulting focused on secure design, privacy, automation safety, and production-ready architecture.
- Operate daily in agent-assisted and AI-native development workflows across cloud and local environments.

Representative Platforms

- **AudioDescript:** AI accessibility platform converting visual context into real-time audio descriptions. audiodescript.com
- **Fridge2Fork:** Computer vision system generating recipes based on fridge contents. fridge2fork.com
- **Cabinet2Cocktail:** AI-powered cocktail generation platform built around ingredient-based reasoning and consumer utility workflows. cabinet2cocktail.com
- **Slither:** Privacy-focused web platform centered on anonymous navigation and secure user experience design. slither-ebon.vercel.app
- **AI & Sons Games Platform:** AI experimentation platform for rapid game development and interactive prototyping. games.aiandsons.io

Information Security Analyst

Oct 2025 - Present | Pittsburgh, PA

Giant Eagle, Inc.

Member of the enterprise Information Security team responsible for strengthening identity-driven security controls, automation, and secure operational practices across hybrid cloud environments.

Focus on improving the organization's security posture through identity security controls, secure automation design, and credential governance.

Key Contributions

- Develop security automation using PowerShell and Microsoft Graph API to strengthen monitoring and enforcement of identity security controls.
- Implement secure credential management workflows using Delinea Secret Server to eliminate plaintext credentials from scripts and automation processes.
- Conduct security analysis of identity infrastructure workflows to identify and eliminate insecure operational practices.
- Support identity-related security investigations including authentication failures, privilege misuse, and compromised account scenarios.
- Partner with infrastructure and IAM teams to implement security-first architecture aligned with Zero Trust principles.
- Provide security guidance for automation and infrastructure projects to ensure credential safety and secure operational practices.

Security Domains

Identity Security, Privileged Access Management, Security Automation, Authentication Security, Application Security, Zero Trust Architecture

Identity & Access Management Analyst

Mar 2020 - Oct 2025 | Pittsburgh, PA

Giant Eagle, Inc.

Identity infrastructure engineer responsible for designing, automating, and maintaining enterprise identity architecture supporting approximately:

- 100,000 users
- 300,000 Active Directory groups
- 1,800 enterprise applications
- 60+ identity lifecycle workflows

Owned operational and engineering responsibility for the organization's identity stack including Microsoft Identity Manager, Active Directory, Microsoft Entra ID, and Delinea Secret Server.

Identity Architecture & Engineering

- Designed and implemented the organization's enterprise RBAC model, establishing standardized access governance structures across identity systems.
- Led the full lifecycle implementation of RBAC across the organization, including architecture design, group strategy, and automation planning.
- Engineered identity lifecycle workflows in Microsoft Identity Manager supporting scalable onboarding, role changes, and offboarding.
- Built dynamic attribute-based and entitlement-based group automation using MIM and Active Directory.
- Maintained hybrid identity architecture spanning Active Directory and Entra ID environments.

Automation & Engineering

- Built reusable PowerShell automation libraries for reporting, batch identity operations, compliance tasks, and operational workflows.
- Developed identity automation using Microsoft Graph API and PowerShell to eliminate repetitive administrative work.
- Created batch automation processes for large-scale Active Directory and cloud group management.
- Automated dynamic group structures across on-premises and cloud environments including attribute-based, entitlement-based, and manually assigned access models.

Major Contributions

- Automated enterprise-wide MFA enrollment as a baseline identity security control across the organization.
- Implemented stale account remediation processes to improve identity hygiene and reduce attack surface.
- Eliminated passwords embedded in scripts by implementing Secret Server credential retrieval mechanisms for service accounts and privileged workflows.
- Served as a subject matter expert for MIM, Secret Server, Azure identity systems, and Active Directory operations.
- Supported disaster recovery and identity emergency response across critical IAM systems.

Systems Engineered & Maintained

Microsoft Identity Manager (MIM)
Active Directory
Microsoft Entra ID
Delinea Secret Server
Microsoft Graph API

PowerShell automation
Exchange identity integrations
ServiceNow identity workflows
Workday identity integrations

Information Technology Support Specialist (Contract)

Oct 2019 - Mar 2020

Giant Eagle, Inc.

Brought in as a contractor to support the rollout of multi-factor authentication across the organization.

- Assisted in enterprise MFA deployment and adoption support.
- Resolved authentication and access issues during MFA rollout.
- Worked with security and infrastructure teams to troubleshoot identity-related onboarding challenges.

Systems Administrator & IT Security

Sep 2018 - Feb 2019

DICK'S Sporting Goods

Supported enterprise systems and infrastructure for a national retail environment spanning 859 stores, 5 distribution centers, and corporate operations.

- Provided first-call resolution across store and enterprise technology environments including POS systems, kiosks, cameras, and cash office systems.
- Remotely diagnosed and resolved infrastructure, application, and access issues across a wide operational footprint.
- Supported high-access operational environments where issues were owned through resolution across systems, services, and user-impacting platforms.
- Worked with enterprise platforms including PeopleSoft and Kronos.

President & Lead Web Developer

2014 - 2017

Vinix Inc (S-Corp)

Founded and operated a formal S-Corporation delivering web development, infrastructure, hosting, branding, and consulting services for startups and business clients.

- Designed and developed websites, custom web applications, and e-commerce solutions.
- Managed cloud hosting and server infrastructure using DigitalOcean and NGINX.
- Built applications using Node.js, Django, and WordPress-based ecosystems.
- Led client consulting, project delivery, branding, support, and technical operations.

EDUCATION

Colorado State University: Computer Science / Software Engineering Coursework (2014 - 2017)

Front Range Community College: Computer Science Coursework (2014 - 2016)

CERTIFICATIONS & DEVELOPER PROGRAMS

Certifications: Microsoft Identity Manager Advanced Training - Oxford Computer Training

Developer Programs: Apple Developer Program (Registered Developer), Google Play Developer (Registered Developer), Authorized to publish applications to the Apple App Store and Google Play through AI & Sons, Minecraft developer partner