

# Alexis Lowe

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## Contact Details

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## Objective

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Principal Engineer architecting and building e-commerce solutions for a leading e-commerce company and with experience of maintaining security infrastructure for a leading fin-tech company.

Seeking a new challenge with a focus on taking greater ownership and driving innovation as Principal Engineer and building on my knowledge and experience in Infrastructure Development, Software Engineering and DevOps.

## Technical Skills

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**CI/CD:** Jenkins, Gitlab CI, Github Actions

**VCS:** Git, Github, Gitlab, SCM

**Programming:** Typescript, Node.js, Rust, Bash, Python, C#, Java, C99/ANSI, X86 and MIPS Assembly, Ruby, Powershell, Latex, ASM, Go, C++

**Infrastructure Automation:**

Terraform/Terragrunt, Ansible, Troposphere, Packer, Make

**Web:** Next.js, Apollo GraphQL

**E-Commerce:** CommerceTools

**System Administration:** Linux Administration and Server Management, Virtualisation, File Storage management, Website Hosting

**Data Engineering:** Data Streaming Cluster Management (Kafka, Zookeeper, SQS) Data collection (Nifi, Rsyslog, Splunk, NxLog) Data analysis (ElasticSearch/OpenSearch, Logstash, Kibana)

**Metrics and Dashboards:** Datadog, Grafana, Prometheus

**Cloud:** AWS, Azure, Digital Ocean

**Containers:** Critical Stack, Kubernetes, Docker, Open Containers, Docker Compose

**Security:** Auth, Vulnerability Scanning and Management (Nessus, RandomStorm, Skybox, Qualys, WhiteHat)

SIEM Solutions (Symantec MSS, QRadar, ELK)

Windows Administration (SCCM, AD)

Web Application Pentesting (BurpSuite, mitmproxy), Penetration testing, forensics Mobile Application Pentesting, Threat Modelling

**Networking:** SSH, FTP, iptables, IPsec, OpenVPN, Wireguard, SCP, SMTP, TCP/IP, DNS, DHCP, UDP, NTP, Wireshark

## Languages - Trilingual

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English: Native

French: Fluent

Spanish: Fluent

Flemish: Basic Knowledge

## Podcasts and Talks

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### Podcasts

- Big Ideas In App Architecture: Unwrapping Moonpig Architectural Insights into Personalization and Scalability.
- AWS Developers Podcast: Scaling E-commerce with Serverless: The Moonpig Story.
- Moonpig Technology Podcast: Event Driven Architecture.

### Talks

- London GraphQL Meetup: Moonpig's GraphQL Journey Scaling with Serverless Federation.
- Serverless London Meetup: Scaling Moonpig's Serverless Backend: Event-Driven Federation at Scale.

## Work Experience

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### **May 2023 - present | Principal Engineer - Enablement at Moonpig**

### **May 2022 - May 2023 | Principal Engineer - E-Commerce at Moonpig**

- Tech Lead for 5 Teams, responsible for their Architecture and Engineering Principles.
  - Coordinated and conducted recurring architecture sessions with the teams to facilitate collaboration and discussion on architectural matters.
  - Architected event-driven systems, designing them to leverage event-driven architecture principles for efficient and scalable operation.
  - Offered technical guidance and support to both senior and junior engineers, providing assistance and expertise to help them overcome technical challenges and achieve their goals.
  - Engaged in collaborative efforts with other principals and their respective teams to ensure consistency and coherence across the entire Tech department.
  - Collaborated with product managers and engineering managers to achieve an ideal technical solution that aligns with the business needs while considering time limitations and technical restrictions including cost management and cost constraints.
- Partnered with the Director of Engineering to spearhead the technology department's efforts in attaining operational excellence.
- Led multiple cross-functional Working Group, providing strategic direction and oversight to deliver organisation-wide improvements and ensure successful completion of engineering-critical initiatives outside the core product function.
- Delivered mentorship and guidance to junior and senior engineers, assisting them in their professional growth and development in their respective fields.

### **Sep 2021 - May 2022 | Senior Engineer at Moonpig**

- Subject matter expert on Terraform and Terragrunt within the Tech department, offering guidance and expertise on these tools.
- Helped lead a significant migration project following the acquisition of Greetz, effectively resolving intricate challenges within a Multi-Tenancy/Multi-instance architecture. Moreover, I utilised my language skills to assist with translations and assisted the UK Tech teams in gaining a better understanding of the Dutch customer base.
- Established a standardised framework for deployments and repositories, specifically designed to assist with the migration project.

### **Jul 2020 - Sep 2021 | Senior Product Security Engineer at Moonpig**

- Developed and implemented the team's processes for vulnerability management.
- Implemented a secrets detection system within the pipeline and established a robust process for efficiently handling leaked secrets.
- Designed and implemented a logging and alerting mechanism for AWS GuardDuty by leveraging Slackbot.
- Established contact points and channels of communication between the Product Security team and the rest of the engineering department.
- Offered engineering support to the Security Operations team during the development of their SIEM (Security Information and Event Management) project.

### **Aug 2017 - Jul 2020 | Cyber DevOps Engineer at Capital One**

- Lead and subject matter expert on logging infrastructure projects providing reliable logging collection and analysis for diverse technologies.
- Provided thought leadership and tech knowledge on CI/CD pipeline improvement projects.
- Designed, built and maintained fully automated CI/CD pipelines using Jenkins for deployments to AWS serving both cloud and on-premise systems.
- Used modern DevOps tooling such as Ansible, Terraform and Troposphere to automate deployment and configuration of systems at scale with a focus on reproducibility and testability.
- Led the team to greater delivery velocity through process improvements leveraging standard engineering practices and automation using Git, Github and JIRA.

- Worked on automating a number of operation workflows using tools such as Python, Bash and Make.
- Developed dashboards and monitoring capability using Datadog to provide proactive detection of issues and visibility on service usage.
- Used performance testing and metrics to create and fine-tune scalable platforms and maximise cost savings.
- Developed guidelines, provided knowledge and took part in threat modelling sessions for hardening and secure usage of containers.
- Consulted and contributed to the design and architecture of security solutions.
- Capital One Cyber Security Meetup Organiser.

### **Jul 2018 - Apr 2019 | Application Security Engineer at Capital One**

- Performed API and Web application penetration tests including customer facing banking applications and PSD2 open banking API.
- Automated pentest report creation using Python, shared via Git and Jira.
- Wrote scripts for developers to retest vulnerabilities after applying their fixes.
- Guided developers in secure coding practices.

### **Sep 2015 - Sep 2016 | Cyber Defence Analyst at Computacenter**

Within the framework of a year's industrial placement from the University of Birmingham worked in the Group Information Assurance division of Computacenter. Worked on ISO27001 compliance, performed infrastructure pentesting, contributed to creation of security operations centre and contributed to the creation of vulnerability management process.

### **Jul-Aug 2012 and 2013 | Delivery and Stock Control at Computacenter Belgium**

Received a two-week training with the stock manager and then was entrusted with stock management responsibilities. Acquired time management and organisation skills during this period.

## **Open-Source**

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### **Maintainer & Host - wkd.dp42.dev**

A web-based tool / frontend for testing and debugging the OpenPGP Web Key Directory (WKD) protocol.

### **Maintainer & DevRel - Keyoxide**

A decentralized, open-source tool for creating and verifying online identities ("personas"), allowing users to prove account ownership while preserving privacy.

## **Education**

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### **2013 - 2017 | BSc in Computer Science with Business Management 2.1, University of Birmingham**

#### **Computer Science First**

Introduction to Cyber Security  
 Networks and Network Security (C99, IPsec and iptables)  
 Operating Systems (C99/ANSI, Linux Kernel)  
 Software Programming (Java and PostgreSQL)  
 Team Project (Made a Multiplayer Java Game)  
 Information and the Web (XML, JavaScript and HTML)  
 Computer Systems and Architecture (X86 & MIPS Assembly)  
 Foundation of Computer Science (Ocaml)

Professional Computing  
 Language and Logic  
 Software Engineering

#### **Business Management 2.1**

Strategic Management  
 Global Marketing  
 Introduction to Marketing  
 Human Resource Management  
 Financial Decision Making  
 Supply Chain Management  
 Financial Analysis  
 International Economics  
 Introduction to Economics  
 Business Organisation and Management

### **2010 - 2013 Collège Dame De Marie, Belgium**

Certificat d'enseignement secondaire supérieur (16/20 equivalent to 320 UCAS Tariff Points)

### **2007 - 2010 Collège Don Bosco, Belgium**

### **2000 - 2007 La Fermette, Belgium**

## **Interests and Activities**

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Technology, Open-Source, Programming, Ethical Hacking and Security, Amateur Photography, Cycling, Travelling, Lego, Gaming

## **Other Details**

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British national

Lived in Belgium before studying in the UK