

Long Do

Senior Backend Engineer | AI/Cloud | Platform Engineer

Cork, Ireland · leo.long.do@protonmail.com · +44 7537 179909 · <https://longdodev.com>

PROFESSIONAL SUMMARY

Senior Backend Engineer with 10+ years of experience across **Cisco**, **Google**, and **Amazon**. Expert in Python, Go, Java, and Cloud AI/ML infrastructure with a strong focus on **scalable microservices** and **GDPR-compliant** data handling.

TECHNICAL SKILLS

Languages: Python, Go, Node.js, JavaScript, TypeScript

Cloud & Infrastructure: GCP (Vertex AI, BigQuery, Pub/Sub, Spanner, Memorystore, GKE), AWS (EC2, Lambda, SQS, SNS, CodeDeploy, RDS, ElastiCache, MSK), Terraform, Kubernetes, Docker

AI / ML: Gemini, Vertex AI, TensorFlow, Amazon Lex, Amazon Polly, model deployment & monitoring

Databases & Messaging: Kafka, Redis, PostgreSQL, Spanner, RDS

Observability & Tooling: Prometheus, Grafana, Helm, gRPC, REST APIs, CI/CD pipelines

Practices: Microservices architecture, distributed systems, event-driven design, blue-green deployments, canary releases, technical mentorship

PROFESSIONAL EXPERIENCE

Amazon

Jun 2022 – Present

Software Development Engineer

Remote

Alexa / Voice Commerce

- Built and deployed a coordination layer that reduced the time between a voice command and a completed purchase action by approximately **1.5 seconds**.
- Designed **recovery logic** that generates a helpful spoken response when an item is unrecognized rather than terminating the shopping session.
- Developed a **dedicated validation service** to prevent duplicate customer charges during network retries and system timeouts.
- Integrated a **retrieval system** that fetches live product details to answer out-of-stock questions naturally.
- Led a training session for 15 engineers to standardize how internal teams **integrate voice capabilities**.
- Deployed a validation framework that catches voice formatting errors across different **hardware devices** before reaching customers.
- Configured the automated removal of voice history logs after 30 days to align with **EU data retention standards**.

Tech stacks: *Python, Go, Amazon Lex, Amazon Polly, AWS Lambda, API Gateway*

AWS Lambda

- Refactored the initialization process of a **serverless runtime** to reduce the time a new function takes to start handling requests by roughly 200ms at the 95th percentile.
- Led the migration of internal request routing to a new service that **sustained higher traffic volumes** with lower operational overhead.
- Mentored 4 junior engineers through **operational best practices** and internal promotion criteria.
- Re-architected the **logging system to redact sensitive customer information** from trace files used for debugging.

Tech stacks: *Node.js, Python, Go, AWS Lambda, AWS CodeDeploy, VPC*

Google

Feb 2019 – Mar 2022

Senior Software Engineer

London, United Kingdom

Google Calendar

- Maintained backend services for **event management supporting** over 500 million monthly active users globally.
- Adjusted **database retrieval patterns** to improve the speed at which complex recurring meeting schedules are displayed.
- Designed the **public interface and permission boundaries** that allow third-party scheduling applications to connect safely.
- Managed the **synchronization protocol** responsible for ensuring calendar changes made offline are eventually reflected correctly on the server.

- Delivered a tool that allows users to **export their entire calendar history** in a standard, machine-readable format to satisfy data access requests.

Tech stacks: Java, C++, Python, Spanner, REST+JSON API, gRPC

YouTube

- Refactored the service that processes **incoming video information updates** to reduce the processing time per event by 25%.
- Added a **temporary storage layer** for frequently accessed video endpoints to reduce strain on the primary database.
- Led the post-incident review following a regional disruption and implemented **safeguards to prevent future cascading failures**.
- Developed operational runbooks and **conducted hands-on training** with new hires on managing the service safely.
- Built the automated workflow that permanently removes video metadata and watch history when an account is closed.

Tech stacks: Python, Go, GCP, Pub/Sub, Spanner, Memorystore (Redis)

Google Cloud AI

- Standardized the process for internal teams to put **machine learning models** into production to reduce manual configuration steps by 30%.
- Built a connector that allows **data analysts to query large datasets** using conversational prompts directly within existing analysis tools.
- Investigated and fixed a slowdown in model response time caused by **inefficient grouping of incoming requests**.
- Engineered the service to automatically failover between geographic locations to maintain availability during zone disruptions.
- Added automatic filtering to the **model training pipeline** to remove personal identifiers from datasets used in EU regions.

Tech stacks: Python, GCP, Vertex AI, BigQuery, Gemini APIs, Docker

Cisco

Aug 2015 – Jan 2019

Software Engineer

Dublin, Ireland

DevNet

- Developed the **initial platform services** that supported the onboarding of over 10,000 external developers in the first 6 months.
- Designed the interfaces that **served interactive documentation** and testing environments to external partners.
- Implemented a request limiting system during the launch phase to **prevent traffic spikes** from degrading the platform for active users.
- Added **management controls** that allowed developers to view, correct, or delete their stored profile information.

Tech stacks: Python, Go, Flask, REST APIs, OpenAPI, Redis (rate limiting)

CloudCenter

- Refactored a reporting module to use **cloud provider data** sources directly, cutting the time required to **generate customer billing** reports by 40%.
- Resolved **report generation failures** for large enterprise accounts by adding intelligent delays and **retries to the data fetching process**.
- Collaborated with engineers from an acquired company to merge their **reporting logic** with the existing platform and documented the new standards.
- Documented best practices for **interacting with cloud service interfaces** to prevent future throttling issues across the engineering team.
- Built a masking layer into the **reporting pipeline** to anonymize any personal data inadvertently collected before storage.

Tech stacks: Python, AWS (EC2, S3, CloudWatch), boto3, REST APIs, retry logic (backoff/jitter), Terraform

EDUCATION

BSc in Computer Science - University College Cork (UCC)

2011 - 2015

CERTIFICATION

[Retrieval Augmented Generation](#) | [Programming with Google Go](#) | [Python Certification](#) | [SQL for Data Science](#)