

# ANGELOS PANAGIOTOPoulos

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## BACKEND DEVELOPMENT

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<b>Programming Languages</b>	Go, Python
<b>Web Frameworks</b>	Huma (Go); FastAPI, Django (Python)
<b>Dependency Management</b>	Go modules (Go), uv (Python)
<b>Data Handling and Analysis</b>	Pydantic, Pandas, NumPy, GORM, SQLAlchemy, Alembic, sqlc
<b>Scheduling and Messaging</b>	RabbitMQ, Apache Kafka, AWS SQS/SNS, Celery
<b>Linting/Formatting/Type Checking</b>	golangci-lint (Go); ruff, mypy (Python)
<b>Documentation</b>	OpenAPI, Markdown
<b>Testing</b>	Testcontainers, testify (Go), pytest (Python)

## FRONTEND DEVELOPMENT

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<b>Programming Language</b>	TypeScript
<b>Runtime</b>	Node.js
<b>Dependency Management</b>	pnpm, npm
<b>Frameworks and Libraries</b>	React, Next.js (App Router), Vite, Tanstack Router, Tanstack Query
<b>Styling and Component Libraries</b>	Tailwind CSS
<b>Client Generation</b>	Orval
<b>Linting &amp; Formatting</b>	eslint, Prettier

## DATABASE AND DATA VISUALIZATION

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<b>Databases</b>	PostgreSQL, MySQL, Neo4j, Elasticsearch, AWS DynamoDB
<b>ORM &amp; Migrations</b>	GORM, sqlc (Go); SQLAlchemy, Alembic (Python)
<b>Data Visualization and Network Analysis</b>	Cytoscape.js, D3.js, NetworkX

## DEVOPS/DEPLOYMENT/CLOUD

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<b>Containerization and Orchestration</b>	Docker, AWS ECS/Fargate
<b>Infrastructure as Code</b>	AWS CDK, Terraform, terraform-exec
<b>CI/CD</b>	GitLab CI/CD, GitHub Actions, CircleCI
<b>Cloud Platforms</b>	AWS (Certified Developer - Associate), GCP
<b>Operating Systems</b>	MacOS, GNU/Linux (Ubuntu, Debian), Windows/WSL2

## MONITORING AND LOGGING

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<b>Monitoring Tools</b>	Grafana, AWS CloudWatch
<b>Structured logging libraries</b>	slog (Go), structlog (Python)

## AGILE METHODOLOGIES

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<b>Agile Practices</b>	Scrum, Kanban
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## WORK EXPERIENCE

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### Stadion

*Backend Engineer (Go/Python)*

April 2025 - Current

*London, UK*

- Built and maintained **AWS backend systems** for live tennis data, with ingestion pipelines on **Lambda/S3**, backend services on **ECS Fargate**, and **RDS MySQL**.
- Stabilised ingestion of external partner data for **high-profile tennis tournaments through finals**, handling heavy traffic with **zero incidents**.
- Migrated **mission-critical live data paths** from Python (Flask) to Go, reducing **CPU/memory usage** and **ECS costs** while increasing throughput.
- Re-architected a latency-prone multi-service pipeline into streamlined Go services for **live data delivery**, improving performance and maintainability.
- Reduced response times from **~20 seconds to milliseconds** and optimized **MySQL queries** with **GORM and raw SQL**.
- Fixed broken database migrations, improving reliability and maintainability of the data layer.
- Reduced **JSON response payloads by up to 95%** for website and mobile clients, lowering latency and bandwidth for high-traffic endpoints.
- Designed and tuned **CloudFront caching strategies** for live scoring endpoints.
- Upgraded services to **Go 1.25** and **Python 3.13–3.14**.
- Documented APIs using **code-first OpenAPI** with **Go/Huma**.
- Introduced **structured logging** and leveraged **CloudWatch queries** to monitor performance and track live pipelines.
- Implemented **CI/CD pipelines** in GitLab and GitHub, with automated linting, formatting, unit, and integration tests (**Testcontainers**).
- Standardised **Go** quality with **golangci-lint**; improved **Python** developer experience with **uv** and **Ruff**.
- Implemented **multi-stage Docker builds** for Go and Python services, reducing image sizes and accelerating ECS deployments.

### Elsewhen

*Freelance Cypher Python Engineer*

February 2025 - April 2025

*London, UK*

- Designed RESTful APIs in **Python (FastAPI)** to support audience targeting and insight generation for advertising initiatives.
- Designed and executed **data migration pipelines** between relational and graph databases, ensuring data integrity.
- Integrated and managed data across **Neo4j** and **PostgreSQL**, using graph models to represent complex relationships.
- Implemented robust data access using **SQLAlchemy** with **Alembic** for version-controlled schema migrations.
- Enforced code quality with **ruff** for linting/formatting and **mypy** for static type checking.
- Built interactive **React + Cytoscape.js** graph visualisations to surface insights and support analysis.
- Presented progress through live demos and stakeholder reviews, incorporating feedback into sprint planning and technical direction.

### Accenture

*Application Lead/Full Stack Engineering Associate Manager*

October 2022 - February 2025

*London, UK*

- Led development of internal security platforms for **CVE reporting** and **red-team infrastructure automation**.
- Built backend APIs in **Python (FastAPI)** and **Go (Huma)**, with **OpenAPI-based documentation** and type-safe client generation via **Orval**.
- Integrated **Terraform (terraform-exec)** and **RabbitMQ** to enable scalable, asynchronous infrastructure workflows.

- Developed **React/TypeScript** frontends using **Next.js** and **Vite (TanStack Router)**, styled with **Tailwind CSS**.
- Implemented **JWT authentication** with **AWS Cognito** and **Azure Entra**, supporting MFA and custom authentication flows.
- Designed data layers using **PostgreSQL**, leveraging **SQLAlchemy (Python)** and **sqlc (Go)** for robust data access.
- Deployed containerized services on **AWS Fargate** and built serverless pipelines with **Lambda, SNS, and SQS**.
- Defined infrastructure as code using **AWS CDK (TypeScript)** for repeatable, streamlined deployments.
- Implemented **GitLab CI/CD pipelines** for automated testing and deployments.
- Visualised infrastructure relationships using **Cytoscape.js** to improve system clarity and operability.
- Mentored junior engineers across backend development, system architecture, and DevOps best practices.

**Infinity Works (part of Accenture)**

*Senior Consultant*

April 2021 - September 2022

*London, UK*

- Built a document ingestion and search platform to improve data retrieval for an insurance client.
- Refactored legacy systems into scalable **Python (FastAPI)** APIs, deployed on **AWS ECS/Fargate** with **PostgreSQL** and **Elasticsearch**.
- Leveraged Elasticsearch features such as phrase matching, advanced queries, and filtering; led index migrations to optimized schemas.
- Implemented OCR ingestion using **Apache Tika** with **SQS**-driven, containerized pipelines.
- Implemented **JWT authentication** and **structured logging (structlog)**, and integrated **Grafana** for monitoring and alerting.
- Improved frontend UX using **Next.js** and **TypeScript**.
- Implemented **GitHub Actions CI/CD** with automated testing and linting (**pytest, black, flake8**).
- Defined infrastructure with **Terraform** and mentored engineers on modern Python, containerization, and testing best practices.

**KPMG UK**

*Senior Software Engineer*

July 2019 - February 2021

*London, UK*

- Delivered technical solutions for finance clients as part of a management consulting team.
- Led integration with external JSON APIs (e.g., Companies House, Equifax), storing and analyzing data in **Neo4j** using **NetworkX**.
- Built an interactive web-based network visualization tool with **FastAPI, React**, and **D3.js**.
- Developed a rule-based loan approval engine and automated report generator using **Python (Flask)** and **openpyxl**.
- Designed and implemented secure authentication flows for internal and external users.
- Coordinated with stakeholders to define schemas and ensure seamless API integration.
- Acted as team lead and mentor, supporting engineers and apprentices in backend, frontend, and data development.

**MediaMath**

*Software Engineer*

August 2017 - July 2019

*London, UK*

- Developed custom integrations with an **ad-exchange platform**.
- Led real-time tracking of advertising entities using **Go, Kafka**, and **PostgreSQL** for downstream processing and third-party notifications.
- Built scheduling and workflow systems for campaigns and bidding strategies with **Python (Flask), Celery**, and **PostgreSQL**.
- Guided an offshore team on architecture, best practices, and deployment of a greenfield bidding automation and forecasting platform.

**Sainsbury's**  
*Software Engineer*

May 2016 - July 2017  
London, UK

- Contributed to the **Groceries On Line** and **Entertainment On Demand** teams at Sainsbury's, delivering backend services for high-traffic e-commerce platforms.
- Built backend microservices for grocery shopping features—product placement, basket management, and payments—using **Go**, **Gorilla**, and **Kong**.
- Developed backend systems for electronic media sales and payment integration, including refunds, using **PHP (Slim)** and external payment gateways.

**Telemetry**  
*Software Engineer*

February 2015 - May 2016  
London, UK

- Contributed to the development of a **Telemetry SaaS platform** providing advertising metrics, reporting, and fraud detection.
- Automated query generation for new metrics to support fraud detection workflows.
- Developed automated reporting for advertising creatives, delivering timely summaries to vendors.

**Aubay**  
*Software Development Engineer for Amadeus IT Group*

November 2012 - June 2014  
Sophia Antipolis, France

- Contributed to the **Altea Group Manager** project, handling airline group reservations.
- Developed web services to support segment-based quotations for origin/destination airlines, implementing business rules such as reservations, child discounts, and location-based pricing.

## EDUCATION

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**University of Southampton**  
*MSc Software Engineering (Merit)*

September 2011 - September 2012  
Southampton, UK

**University of Piraeus**  
*BSc Digital Systems / Communication Systems and Networks (2:1)*

September 2005 - July 2010  
Athens, Greece

**American College of Greece**  
*Secondary school (18.3/20)*

September 1999 - July 2005  
Athens, Greece

## OTHER EXPERIENCE

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**Personal Website**  
<https://www.angelospanag.me>

- Developed and maintain a personal website using **Next.js** and **Bun**, customized from a starter template, with automated deployment on **Vercel** and a custom domain via **Namecheap**.
- Source code available on GitHub: <https://github.com/angelospanag/my-personal-site>.

**WordPress photography blog**  
<https://jimpanagphotography.wordpress.com>

- Created and maintain a WordPress photography blog for my father.

**Military service at the 2nd Battalion of Fighting Helicopters**  
*Private*

Nov 2010 - Aug 2011  
Greece

- Military Occupational Specialty (MOS): Clerk/Computer operator

## NON-TECHNICAL

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- Languages: English (bilingual proficiency), French (professional working proficiency), Greek (native)
- Dual citizenship (British, Greek)
- European driving licence