# ANGELOS PANAGIOTOPOULOS

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#### BACKEND DEVELOPMENT

Programming Languages Go, Python

Web Frameworks Huma (Go), FastAPI (Python), Django (Python)

**Dependency Management** Go modules (Go), uv (Python)

Data Handling and Analysis Pydantic, Pandas, NumPy, Matplotlib, SQLAlchemy, Alembic, sqlc

Scheduling and Messaging RabbitMQ, Apache Kafka, AWS SQS/SNS, Celery

Linting/Formatting/Type Checking golangci-lint (Go), Go fmt (Go), ruff (Python), mypy (Python)

**Documentation** OpenAPI, Markdown

**Testing** testify (Go), pytest (Python)

#### FRONTEND DEVELOPMENT

Programming Language TypeScript
Dependency Management pnpm, npm

Frameworks and Libraries React, Next.js (App Router), Vite, Tanstack Router, Tanstack Query

Styling and Component Libraries Tailwind CSS

Client Generation Orval

Linting & Formatting eslint, Prettier

#### DATABASE AND DATA VISUALIZATION

Databases PostgreSQL, Neo4j, Elasticsearch, AWS DynamoDB ORM and Migrations sqlc (Go), SQLAlchemy (Python), Alembic (Python)

Data Visualization and Network Analysis Cytoscape.js, D3.js, NetworkX

#### DEVOPS/DEPLOYMENT/CLOUD

Containerization and Orchestration Docker, AWS ECS/Fargate

Infrastructure as Code

CI/CD

GitLab CI/CD, GitHub Actions, CircleCI

Cloud Platforms

AWS (Certified Developer - Associate), GCP

Operating Systems MacOS, GNU/Linux (Ubuntu, Debian), Windows/WSL2

### MONITORING AND LOGGING

Monitoring Tools Grafana, AWS CloudWatch Structured logging Libraries slog (Go), structlog (Python)

#### AGILE METHODOLOGIES

Agile Practices Scrum, Kanban

Elsewhen

February 2025 - April 2025

Freelance Cypher Python Engineer

London, UK

- · Designed RESTful APIs using Python and FastAPI to support audience targeting and insight generation for advertising initiatives.
- · Designed and executed data migration pipelines between relational and graph databases, maintaining data integrity throughout.
- · Integrated and managed data across Neo4j and PostgreSQL, leveraging graph structures to model relationships.
- · Used SQLAlchemy for PostgreSQL ORM and Alembic for version-controlled schema migrations.
- · Enforced maintainable code standards using ruff for linting/formatting and mypy for static type checking.
- · Developed interactive graph visualizations using Cytoscape.js and React to surface insights and facilitate analysis.
- · Delivered live demos and presented progress in weekly stakeholder meetings, gathering feedback and aligning technical direction with upcoming sprint goals.

Accenture

October 2022 - February 2025

Application Lead/Application Development Associate Manager

London, UK

- · Led development of internal platforms for reporting CVEs to clients and enabling red teams to automate infrastructure deployment for penetration testing.
- · Mentored junior engineers across API development, frontend/backend architecture, and DevOps practices.
- · Built API backends in Python (FastAPI) and Go (Huma), with OpenAPI for documentation.
- · Integrated Terraform (via terraform-exec) with backend services; implemented RabbitMQ queuing for scalable, async infrastructure workflows.
- · Developed React/TypeScript frontends with Next.js or Tanstack Router + Vite; styled with Tailwind CSS.
- · Generated type-safe React clients using Orval (OpenAPI + Tanstack Query).
- · Set up GitLab CI/CD pipelines for automated testing and deployment.
- · Visualized infrastructure with Cytoscape.js for relationship management and clarity.
- · Implemented JWT auth with AWS Cognito and Azure Entra, supporting MFA and custom UI.
- · Used PostgreSQL with SQLAlchemy (Python) and sqlc (Go) for robust data handling.
- · Deployed containerized services on AWS Fargate; created serverless pipelines using AWS SNS, SQS, and Lambda.
- · Defined infrastructure as code using AWS CDK (TypeScript) for streamlined deployments.

#### Infinity Works (part of Accenture)

April 2021 - September 2022

Senior Consultant

London, UK

- · Built a document ingestion and search platform to improve data retrieval for an insurance client.
- · Refactored legacy services into scalable APIs using Python 3.10, FastAPI, PostgreSQL, and Elastic-search (deployed via AWS ECS/Fargate and API Gateway).
- · Enhanced Elasticsearch with domain-specific query language, advanced filters, snippets, and phrase matching; led index migrations to optimized schemas.
- · Added OCR support via Apache Tika in ingestion pipelines using AWS SQS and Dockerized services.
- · Implemented JWT-based auth (FastAPI + PyJWT) and structured logging with structlog; integrated Grafana for monitoring and alerting.
- · Improved frontend UX with Next.js and TypeScript.
- · Set up GitHub Actions CI/CD with Poetry, pytest, black, and flake8 to ensure code quality and test coverage.
- · Deployed infrastructure via Terraform; mentored team members on modern Python, containerization, and testing best practices.

Senior Software Engineer

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 data in Neo4j and performing network analysis with NetworkX.
- · Built an interactive web-based network visualization tool using FastAPI, React, and D3.js.
- · Developed a rule-based loan approval engine and automated Excel report generator using Python, Flask, and openpyxl.
- · Designed and implemented secure auth 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 a collaborative environment.

MediaMath
Software Engineer
August 2017 - July 2019
London, UK

- · Developed custom integrations with the TerminalOne 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 future 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 May 2016 - July 2017 Software Engineer London, UK

- · Part of the 'Groceries On Line' and 'Entertainment on Demand' teams at Sainsbury's.
- · Implemented backend logic for a range of e-commerce services about grocery shopping including product placement, basket, payments using microservices-oriented architecture (Go, Gorilla, Kong).
- · Implemented backend logic for e-commerce services about shopping electronic media (music, books, movies) and integration with external payment gateway that handled customer payments and refunds (PHP, Slim).

**Telemetry** February 2015 - May 2016 Software Engineer London, UK

- · Part of the developer team of the Telemetry SaaS platform responsible for providing advertising metrics, reporting and fraud detection.
- · Automated query generation for inserting new metrics aimed at fraud detection.
- · Automated the online generation of reports containing summaries of advertising creatives aimed at vendors.

AubayNovember 2012 - June 2014Software Development Engineer for Amadeus IT GroupSophia Antipolis, France

- · Part of the Altea Group Manager project responsible for handling airline group reservations.
- · Implemented web services facilitating quotation for segment-based/origin and destination airlines including business rules (reservations, child discounts, location based quotations).

#### **EDUCATION**

University of Southampton

MSc Software Engineering (Merit)

September 2011 - September 2012 Southampton, UK

University of Piraeus

September 2005 - July 2010 Athens, Greece

BSc Digital Systems / Communication Systems and Networks (2:1)

## OTHER EXPERIENCE

#### Personal website

https://www.angelospanag.me

- · My personal website made in Next.js, using Namecheap for domain registration and hosted on Vercel
- · Code available on my GitHub: https://github.com/angelospanag/my-personal-site

# WordPress photography blog

https://jimpanagphotography.wordpress.com

· Created and actively managing a blog for my father who is interested in photography

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

Nov 2010 - Aug 2011

Greece

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

#### **NON-TECHNICAL**

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