Costas Papanicolaou

+357 99 788 508 – costas@cpapanicolaou.net – www.cpapanicolaou.net

PROFILE

Senior software engineer with over 10 years of commercial experience building and scaling backend systems, APIs and cloud services, mostly in **Python**, with **Java** (Spring Boot) as a secondary language and front-end work in **React.js** and **Vue.js**. Most recently the **main backend engineer** behind the migration of a **SaaS cybersecurity platform** from a per-tenant monolith (~100 separate deployments) to standalone **multi-tenant microservices**. Experienced in Python frameworks **FastAPI** and **Django**, along with **Kafka**, **Redis** and **AWS**. Holds an MSc in Information Security (UCL) and a track record of delivering production software for clients including Netflix, Amazon and Vodafone.

WORK EXPERIENCE

SENIOR SOFTWARE ENGINEER May 2024 – Aug 2026
TRG Solutions – *Limassol, Cyprus*

- **Main backend engineer** on a two-year effort to decompose a monolith deployed once per tenant (~100 deployments), extracting five business-critical domains into **standalone multi-tenant services**, each deployed once and shared by all tenants.
- Rebuilt and owned **five business-critical services** end to end: Cases & Targets, IAM, Billing, Notifications and Reporting.
- Built asynchronous, event-driven services with **FastAPI**, **Kafka**, **MongoDB** and **Pydantic**, delivering new features alongside the migration.
- **Main point of contact for production incidents** across all five services, handling investigation, root-cause analysis and fixes.
- Worked with the team lead on migration planning and milestones, in a small, high-ownership team of 4–5 engineers and QA.
- Services shipped via **Jenkins** CI/CD and **ArgoCD** (GitOps) to **Kubernetes**.
- Used **AI agents (Claude Code) and AI Skills** daily for development and code review, as part of a team-wide move to AI-assisted engineering.

SOFTWARE DEVELOPMENT SPECIALIST Mar 2022 – May 2024
Vubiquity – *Limassol, Cyprus*

- **Backend Specialist** in the Content Engineering Team of a **global media services provider**, responsible for delivering high-quality, error-free video content to clients including Netflix, Amazon, Google and Hulu.
- Built backend services in Python and Node.js (NestJS, TypeScript) on **AWS serverless technologies** — Lambda, API Gateway, SQS, DynamoDB and Step Functions.
- Delivered prototype solutions for video analysis, encoding and localisation across three SCRUM teams, and developed UI features in **React.js**.
- **Mentored** junior developers and ensured they stayed on track with their deliverables.

SENIOR FULL STACK DEVELOPER Jun 2020 – Mar 2022
Phoebe Research and Innovation – *Nicosia, Cyprus*

- Developed **IoT monitoring and optimisation platforms** at an R&D startup, in collaboration with the KIOS research centre at the University of Cyprus.
- Built backend systems in **Python**, **Django REST Framework**, **PostgreSQL**, **Redis** and **InfluxDB** for research projects in smart buildings and water analytics.
- Developed front-end interfaces in **Vue.js** and owned all **Docker** server deployments.

SENIOR FULL STACK DEVELOPER Nov 2018 – Jun 2020
Cocoon Creations – *Nicosia, Cyprus*

- Delivered web and mobile applications at an **award-winning development firm** for clients including JCC.
- Developed the commercial **Python/Django**, **PostgreSQL** and **Redis** web application for London-based startup "Racecheck", including a **Stripe** payments workflow for marathon ticket purchases and its front end in HTML, jQuery and Bootstrap.

SOFTWARE DEVELOPER Mar 2016 – Nov 2018
Amdocs – *Limassol, Cyprus*

- Developed the **ordering application of Vodafone Ireland** in a SCRUM team of 5, designing, building and consuming **RESTful APIs** with **Java** and **Spring Boot** on **Oracle SQL**.
- Wrote unit tests with **JUnit** and **Mockito** to ensure changes met functional requirements and test plans.
- Supported Vodafone in diagnosing and resolving production defects under tight delivery deadlines.

SOFTWARE DEVELOPER Oct 2014 – Mar 2016
Interoute Communications – *London, UK*

- Developed commercial web applications such as the "Network Map" in **Python**, HTML and JavaScript for the operator of Europe's largest network and cloud services platform.
- Contributed to internal **Information Security** projects, including the audit system of Interoute's cloud platform.

EDUCATION

MSC INFORMATION SECURITY Sep 2012 – Sep 2013
University College London – *London, UK*

- **Modules:** Cryptography, Computer Security, Information Security Management, Systems Requirements Engineering.
- **Dissertation:** "A novel authentication solution" — analysed the security and usability of a novel authentication scheme and built its prototype web application.

BSC COMPUTER SCIENCE Sep 2009 – Jul 2012
University of Surrey – *Guildford, UK*

- **Achieved Upper Second Class Honours (2:1, 69%).**
- **Modules:** Software Engineering, Web Applications Development, Data Structures and Algorithms, Databases, Web Applications Security.

TECHNICAL SKILLS

- **Languages:** Python, TypeScript, JavaScript, Java, SQL, Bash
- **Backend & APIs:** FastAPI, Django / Django REST Framework, Spring Boot, Node.js, NestJS, REST APIs, Kafka, event-driven microservices, multi-tenant architecture, Pydantic
- **Cloud & DevOps:** AWS (Lambda, API Gateway, SQS, DynamoDB, Step Functions), Docker, Kubernetes, Jenkins, ArgoCD, Git, CI/CD, Sentry, Linux
- **Databases & Caching:** PostgreSQL, Redis, Oracle, MySQL, MongoDB, DynamoDB, InfluxDB
- **Front-end:** React.js, Vue.js, HTML/CSS, jQuery, Bootstrap
- **AI-Assisted Development:** Claude Code, AI agents and AI Skills for engineering workflows

PUBLICATIONS

- Papanicolaou C., Krol K., Vernitski A. & Sasse M.A. (2015). **"Too taxing on the mind!" Authentication grids might not be for everyone.** HCI International 2015, 3rd International Conference on Human Aspects of Information Security, Privacy and Trust.

ADDITIONAL INFORMATION

- **Languages:** Greek (Native), English (Fluent)
- **Professional Membership:** Member of the British Computer Society (BCS)
- **Interests:** Technology and emerging AI tooling, tennis, basketball and walking nature trails.