Petros Lambropoulos

Independent Systems Consultant | Agentic Systems & Production AI

Athens, Greece
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Professional Summary

I work on AI systems at the point where abstractions start to fail: production agents, evaluation pipelines, and AI-first platforms that have to survive real-world constraints. With 12+ years across software engineering, applied ML, and system design, my focus is on turning fragile prototypes into stable, deployable systems by navigating ambiguous requirements, incomplete metrics, and evolving research goals. Currently operating as an independent consultant partnering with startups and research teams on agentic architectures, reliability, and infrastructure beyond the demo stage.

Professional Experience

Independent Systems Consultant | September 2024–Present

Partnering with startups, research teams, and product-driven organisations on production SaaS and AI systems, with a focus on agents, evaluation, and system architecture beyond the prototype stage.

Scope of work: - Designing and stabilising agentic systems for real-world deployment - Architecting SaaS platforms from early design to production readiness - Evaluation, reliability, and failure-mode analysis under ambiguous requirements - Translating cutting-edge AI research into deployable engineering systems

Selected engagements:

Hedera / CNO: Architected compliance-first tokenization and trading infrastructure (https://cno.zone/)
ethereum-protocol-verification: Built an LLM-powered verification pipeline bridging EIP obligations and execution-specs
Dikaio.ai: Guided the transition of a legal-tech RAG prototype into a production engine
Rythm Hoppers: Built domain-specific SaaS platforms integrating Greek regulatory systems—myDATA invoicing and Viva Wallet POS
University of Piraeus: Conducted applied ML research on credit-risk modelling and feature engineering
Rooted Layers: Author of a technical publication on AI systems and infrastructure (https://lambpetros.substack.com/)

Senior Software Engineer, NLP Team - Workable (Athens) | 2022-2024

Launched Workable's first generative AI proofs of concept (job-post generation, interview-question drafting, resume parsing), presented company-wide, and secured executive buy-in for productionisation.
Built Python ML microservices powering AI-driven candidate experiences across the hiring platform; deployed via AWS EKS + Kubernetes/Helm with RabbitMQ/Kafka event workflows supporting 10+ services while processing tens of thousands of resumes daily from a 0.5 billion-record corpus.
Partnered with product and design to transform prototypes into deliverables while defining evaluation, deployment, and monitoring standards for the ML stack.

Senior Software Engineer - NannyML (Remote) | 2021-2022

Piloted monthly ML monitoring prototypes with a six-person EU founding team searching for product-market fit, partnering with research to operationalise drift detection and alerting.
Shipped containerised Python microservices on Amazon EKS with Helm, improving deployment reliability and halving onboarding time for new customers.
Championed CI/CD, testing, and observability investments that underpinned the team's first deals.

Senior Backend Engineer - Orfium (Athens) | 2020-2021

Led Django/PostgreSQL services for music-licensing operations, ensuring twelve-factor alignment and reliable Heroku releases.
Introduced API design and observability improvements that reduced support load and surfaced actionable analytics for business teams.

Team Lead - Big Data Engineer - Encode S.A. (Athens) | 2015-2020

Architected a PySpark + Elasticsearch platform processing 100K-user network datasets within a business day, including large-scale performance validation.
Optimised the Python/MySQL pipeline (multiprocessing, Redis caching) to scale throughput from 1K to 10K users while eliminating chronic bottlenecks.
Mentored junior engineers across long-running coaching engagements and embedded with security analysts to convert threat intelligence into production detection pipelines.

Python Software Developer, Web Applications - Neuropublic (Athens) | 2014-2015

Built Python services for precision-agriculture products forecasting crop returns from environmental and nutritional data models.

Intern Software Engineer, Data Acquisition - Skyscanner (Edinburgh) | March 2013 - August 2013

Owned Python APIs and scraping pipelines that kept BAU ingestion services running while extending core team coverage.

Independent AI Initiatives & Advising

Brain Metrics Initiative (2022): Led incident response for a multi-million-request DDoS surge, implemented custom Cloudflare mitigation, and authored the postmortem and resilience roadmap.
Langaware (2021): Demonstrated a BERT-based solution for the Boston Theft Challenge to the CEO as an exploration of applied NLP.
Beat (ride-hailing scale-up, distinct from Free Now; 2020): Built a taxi-demand forecasting prototype for Lima for showcasing to the AI/Data team.

Speaking & Community

Flash talk on intrusion detection with NLP at the Cybersecurity Social event during ICLR 2020.
Active member of the Python and NLP communities, participating in meetups and conferences in Athens and Edinburgh. (AUEB NLP, PyData Athens, Ministry of Testing Athens, Edinburgh Meetups, ICLR 2020 etc.)

Education

MSc, Computer Science - University of Edinburgh, 2011-2012 *(Thesis with distinction on parallel MapReduce operators; coursework in parallel algorithms, NoSQL databases, and cloud-scale data processing)*
BSc, Physics - University of Athens, 2007 *(Thesis on programming digital signal processors, with CS fundamentals, applied physics specialisation, and advanced physics and mathematics coursework)*
Erasmus Exchange - University of Bonn, 2004-2005

Professional Development & Training

Athens NLP Summer School (2019): intensive programme covering state-of-the-art NLP research and applications.
Coursework in Electronic Automation & Information Systems - University of Athens (2007-2009): partici-

pated in the computer science conversion programme with emphasis on embedded systems and information processing.

Big Data Architecture with Apache Spark (2018): training on distributed data engineering patterns and performance tuning for Apache Spark.

Core Skills

GenAI & AI Product: Generative AI Delivery, RAG, LangChain, OpenAI APIs, Agents, Pinecone, Product Storytelling, NLP, MLflow

Leadership & Delivery: Stakeholder Alignment, Cross-functional Leadership, Mentoring, Executive Communication, CI/CD Automation, Microservices Architecture, Scalable Data Pipelines, Observability, Incident Response

Core Technology Stack: Python, PySpark, SQL, AWS (EKS, EC2, S3), Kubernetes, Terraform, PostgreSQL, Elasticsearch, Django, FastAPI, PyTorch, TypeScript/React