



Petros Mitseas

Machine Learning Engineer · AI Consultant

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Profile

Machine learning engineer with an MSc in Artificial Intelligence and a background in production software engineering. I have led deep learning work from research to production in medical AI and speech technology, built LLM-based document retrieval for enterprise customers, and published peer-reviewed research, including a Best Paper Award at ACII 2024. I now help companies plan, build and run AI systems through my own consultancy.

Experience

Nov 2025 – Present	AI Lead · Aisthesis Medical London, UK · Remote Leading the design, development and deployment of a deep learning model for sepsis prediction on real-world clinical data. Architected and co-developed the full AI pipeline: data extraction, preprocessing, feature engineering, model training, evaluation and reporting. Established team infrastructure and engineering workflows (Jira, version control, coding standards, internal productivity tools). Drive R&D for future product directions, contributed to the production integration of the model, and work closely with leadership and clinical teams on strategy.
Jan 2025 – Oct 2025	Senior Machine Learning Engineer · Behavioral Signals Los Angeles, US · Remote Technical lead for the AI-Labs initiative, integrating the company's deep learning behavioural model into customised applications. Designed and implemented the APIs for real-time emotion recognition and deepfake detection, enabling low-latency inference at scale. Played a key role in taking the deepfake detection and emotion recognition models from R&D to production. Worked with project managers and stakeholders to deliver a million-dollar project on time, and supported sales with tailored technical proposals.
Jan 2025 – Sep 2025	Contractor · Break-Even Consulting Athens, Greece Architecture and development of Pharos, an AI-powered documentation retrieval platform. Launched into production within months for two enterprise customers with knowledge bases of up to a hundred thousand documents.
Sep 2022 – Dec 2024	Machine Learning Engineer · Behavioral Signals Los Angeles, US · Remote Research, development and deployment of deep learning audio models achieving state-of-the-art performance in emotion and behavioural classification. Built infrastructure for annotation, data processing and model training. Productised the models through the company's API, the AI Mediated Conversations product and US government-related projects. Published at INTERSPEECH and ACII.
Aug 2019 – Aug 2022	Software Engineer / Consultant · Cognition Athens, Greece End-to-end work on telecom user portals for order capturing, CRM and billing. Designed, developed, tested and maintained production code (Java, Spring Boot, Spring Cloud). Migrated legacy monolithic systems to microservices and set up CI/CD pipelines in large, multi-team Scrum projects.
Feb 2019 – Aug 2019	System Support · 32nd Special Forces Marines Brigade Volos, Greece Network and server administration in the IT department. Developed Python and Java tools to automate routine work.

Mar 2017 – Aug 2017	Embedded Systems Engineer · Kenotom P.C. Thessaloniki, Greece Software for ARM microcontrollers in C (development, debugging, unit testing). Designed the communication infrastructure for a network of connected microcontrollers.
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Education

Oct 2021 – Mar 2023	MSc in Artificial Intelligence NCSR "Demokritos" & University of Piraeus Grade: 9.43/10 · Thesis: <i>Deep Learning Methods for Cover Song Identification</i>
Sep 2012 – Jul 2018	Diploma in Electrical & Computer Engineering (Integrated MEng) Aristotle University of Thessaloniki Grade: 8.23/10 · Thesis: <i>Application of Reinforcement Learning in Robot Grasping</i>

Publications

2024	Emotion-Aware Speech Popularity Prediction: A Use-Case on TED Talks Best Paper Award 12th International Conference on Affective Computing and Intelligent Interaction (ACII), Glasgow, pp. 300–308 · doi: 10.1109/ACII63134.2024.00039
2024	RobuSER: A Robustness Benchmark for Speech Emotion Recognition 12th International Conference on Affective Computing and Intelligent Interaction (ACII), Glasgow, pp. 219–227 · doi: 10.1109/ACII63134.2024.00030
2023	Cross-Lingual Features for Alzheimer's Dementia Detection from Speech Proc. Interspeech 2023, pp. 3008–3012 · doi: 10.21437/Interspeech.2023-1934

Technical articles

DZone	Spring Reactive Microservices: A Showcase Read
DZone	Full-Duplex Scalable Client-Server Communication with WebSockets and Spring Boot Part 1 Part 2

Skills

Machine learning & AI	Supervised and unsupervised learning, deep learning (training & evaluation), PyTorch, Transformers
Generative AI	Agentic frameworks (LlamaIndex), vector databases (Milvus), retrieval-augmented generation (RAG)
ML engineering & backend	Python, FastAPI, Flask, Java, Spring Boot, Docker, MLflow, Triton Inference Server
Architecture	System and microservices design, scalable distributed systems
Frontend	React
Leadership	Team leadership, project planning, stakeholder communication, technical proposals; Agile, Scrum and Waterfall

Languages

Greek	Native
English	C2 (certified)
German	B1 (certified)