

Nikoleta Papadopoulou

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Applied AI Engineer passionate about Deep learning, LLMs, and deploying AI solutions into production



WORK EXPERIENCE

TDK InvenSense France

Feb 2025 – Jul. 2025

Grenoble, France

Machine Learning Engineer Intern

- Designed a preprocessing pipeline for accelerometer time series data: filtering, normalization, segmentation.
- Developed and optimized **deep neural networks** combining: 1D **CNNs** (for local temporal feature extraction) with **GRU layers** (for pattern modeling) to classify tap events on noisy wearable-sensor data.
 - **Key challenges:** low SNR on single taps, strong inter-user variability, data inconsistency across use cases and the need for a **small memory efficient model** with strong robustness against false accepts
 - **Solutions:** introduced noise-based data augmentation and imbalance handling methods (focal loss), run extensive hyperparameter searches and applied multiple regularization techniques to prevent overfitting → achieved > 90% classification accuracy on the embedded prototype.
- Collaborated with the embedded ML team to deploy the final model using the company's internal inference pipeline and validated reliable real-time earbud prototype within its memory constraints.

Ingeniarius Ltd

Jun. 2021 – Aug. 2021

Robotics Trainee

Porto, Portugal

- Worked with ROS, Arduino and Raspberry Pi platforms for mobile robot control.
- Gained hands-on experience with Linux system administration and embedded programming.
- Demonstrated Implemented low-level and high-level control algorithms and tested robot navigation behaviors.

Metratek Telematics Ltd

Apr. 2020 – Jul. 2020

Junior Project Assistant

Remote

- Worked on a pilot project with Motor Oil HELLAS, contributing to the automation of docking processes.
- Collected and analyzed hardware performance data, updated SQL databases, and produced client reports.

EDUCATION

Grenoble INP - Ense³, Université Grenoble Alpes (UGA)

Grenoble, France

Master's Degree (M2) in Technologies des Systèmes d'Information (TSI)

Mobile, Autonomous, and Robotic Systems (MARS)

- Relevant Courses: AI and Automation, Systems Monitoring & Diagnostics, Mobile Robotics, Computer vision project on pose detection using ML

University of Patras

Master of Engineering – MEng, Mechanical Engineering

Patras, Greece

- Grade: 7.71/10

▪ Thesis Title: **“Simulation, fabrication and programming of a low-cost quadruped”**

Developed an open-source 3D-printed quadruped robot using ROS Noetic on a Raspberry Pi 4B (Ubuntu 20.04) and a Teensy 4.0 microcontroller for servo control, with an IMU sensor for orientation tracking.

SKILLS, LANGUAGE & INTERESTS

- **Skills:** Python, C++, LLMs and DNNs, TensorFlow, Keras, PyTorch, Scikit-learn, Linux, Git, Docker, MATLAB, Windows Office, SQL
- **Languages:** English (C2), Greek (Native), French (B1 Intermediate), Spanish (B1)
- **Soft Skills:** Team-player, Adaptability, Curiosity and Continuous Learning, Problem Solving, Collaboration, Communication