Panagiotis Trypos

Computer Science & Engineering Graduate

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Profile

Recent Computer Science & Engineering graduate with strong hands-on experience building end-to-end applications and complex systems. Proficient in backend frameworks (Spring Boot, FastAPI) and relational databases (MySQL, SQLite). Proven ability to deliver high-quality code across diverse domains, from full-stack web platforms to static code analysis tools. Seeking software engineering opportunities to contribute to scalable software solutions.

Education

Integrated Master of Science (MSc) in Computer Science & Engineering
Polytechnic School, University of Ioannina
5-year program (300 ECTS) — Graduated: July 2026

Technical Skills

Programming Languages: Python, Java, C, C++, JavaScript, SQL
Frameworks & Libraries: Spring Boot, FastAPI, Flask, PyTorch, TensorFlow, Scikit-learn, OpenCV, NumPy, Pandas, Matplotlib, Thymeleaf, NetworkX
Databases: MySQL, SQLite
Mobile & Platforms: Android Development
Tools & Environments: Git, GitHub, Maven, Gradle, Linux CLI, Windows

Selected Projects

GodClassInspector

Developed a Java-based static code analysis tool as an Eclipse project to identify the "God Class" anti-pattern. Utilized JavaParser to extract and analyze Abstract Syntax Trees (AST) and calculated structural metrics, including Access to Foreign Data (ATFD), Tight Class Cohesion (TCC), and Weighted Method Count (WMC). Integrated PlantUML to automatically generate visual UML diagrams of the target codebase. Designed an automated recommendation engine that provides users with actionable refactoring suggestions—specifically utilizing Extract Method, Move Method, and Extract Class techniques—to systematically split monolithic classes.

Traineeship App

Developed a Spring Boot platform (Java 21, MySQL, Thymeleaf) to manage student traineeship lifecycles, featuring Spring Security role-based access and a Strategy Pattern-based matching algorithm to pair students with supervisors.

ControlPC

Designed and developed a local network client-server application for remote computer management. Built the client-side as a native Android application using Java, and developed a

multi-threaded backend server in C utilizing the Windows API and Winsock2. Engineered custom network communication by implementing a UDP socket for automatic local device discovery and a TCP socket for reliable message transmission and system command execution.

MLP Neural Network Library (From Scratch)

Built a multi-layer perceptron neural network library entirely from scratch, utilizing NumPy for efficient vectorized matrix calculations and Pandas for dataset preprocessing. Implemented forward and backward propagation manually, gaining a practical understanding of model training, optimization techniques, and numerical stability without relying on high-level frameworks like PyTorch or TensorFlow.

Languages

Greek (Native)
English: C2 Proficiency – LRN