Michail Panagiotis Bofos

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Education

Utrecht University, MSc. in Artificial Intelligence — September 2023 – July 2025

- GPA: 7.84/10
- **Coursework:** Deep Learning & Pattern Recognition, Evolutionary Computing, Natural Language Processing, Human-Centered Machine Learning, Data Science for Society, AI-Driven Content Generation, Cognitive Modeling

University of Cyprus, BSc. in Computer Science — September 2018 – June 2022

- GPA: 8.38/10
- **Coursework:** Object-Oriented Programming, Computer Organization, Data Structures and Algorithms, Adv. Software Engineering, Systems Security, Human-Computer Interaction, Machine Learning, Web Technologies, Calculus I & II, Elements of Linear Algebra, Intro to Probability & Statistics, Theory of Computation

Experience

Software Engineer, PCN Tech (Part Time, Remote) – Nicosia, CY — November 2023 – Current

- Developed SQL Server views, functions, triggers, and procedures for Back-Office and POS systems
- Built a database synchronization system between the central and branch SQL Servers for stock control
- Implemented a CCNET-based Bank Note Acceptor with fault detection and recovery
- Created a wet stock monitoring system to detect fuel discrepancies and tank leaks
- Designed an IFSF-based forecourt control system for fuel dispensers and tank gauges via RS232/RS485 and TCP/IP

Researcher, Networks Research Laboratory (NETRL) – Nicosia, CY — March 2023 – June 2023

- Implemented user authentication using keystroke dynamics and Random Forests
- Presented developed platforms at internal meetings and EU multiplier events

Software Engineer & Researcher, Cognitive UX GmbH – Heidelberg, DE — July 2022 – July 2023

- Developed a Virtual Reality art exhibition editor using A-Frame
- Built responsive front-end interfaces with HTML5, CSS3, and JavaScript
- Implemented back-end services using Django and PostgreSQL
- Enabled server-client communication via AJAX

Projects

Automated detection of positive/non-positive shyness in children from videos — MSc. Thesis Project

- Classified positive/non-positive shyness in videos of 12 and 15-month-old children.
- Tools & Models Used: SAMURAI, VideoMAE, VideoMamba, VideoLLaVA, XGBoost, Optuna, OpenCV

Natural Gas Demand Prediction System using Advanced Recursive Neural Networks (LSTM & GRU) — BSc. Thesis Project

- Developed a system for hourly natural gas demand forecasting using meteorological data, implementing LSTM and GRU neural networks
- Tools & Languages Used: Python, Keras, Pandas, Matplotlib

Graph bi-partitioning with genetic algorithms — Link to repository

- Solved the graph bi-partitioning problem using MultiStart, Iterated, and Genetic Local Search strategies combined with the Fiduccia-Mattheyses heuristic, optimized via a custom doubly linked list for efficient local search
- Tools & Languages Used: C#

Agriculture dashboard Netherlands Link to repository

- Developed an interactive web dashboard visualizing Dutch agricultural trends by integrating CBS and FAOSTAT datasets; implemented dynamic choropleth maps and time-series plots; deployed with Docker Compose; enabled real-time refresh using RabbitMQ messaging
- Tools & Languages Used: Dash (Flask-based), Python, Pandas, Plotly, Docker, RabbitMQ, Bootstrap, PostgreSQL

Pokédex — mobile Pokémon recognition app Link to repository

- Computer vision system that identifies Pokémon from camera photos using a HuggingFace model
- Full backend pipeline: FastAPI, Apache Kafka, Redis, PostgreSQL auto-populated via PokéAPI
- DevOps stack: Containerized microservices with Docker, nginx reverse proxy, ngrok tunnelling; monitoring via Prometheus, Node Exporter, Grafana, and Portainer
- Mobile app built using React Native

TMDb Spark Recommendation Extension — Movie Recommendation System Link to repository

- Collaborative filtering movie recommender using Spark ALS and the MovieLens dataset, enriched with TMDb metadata
- Full backend pipeline: FastAPI API, Redis caching, Spark job orchestration, and TMDb API integration
- DevOps stack: Multi-container Docker Compose setup with Spark master/worker, backend, Redis, and job-runner services on a custom network
- Chrome extension frontend for user authentication and personalized recommendations based on TMDb ratings

WharfMap — VS Code Docker Compose Visualizer VS Code Marketplace

- Built a Visual Studio Code extension that parses Docker Compose YAML files and generates architecture diagrams, with export support for PNG, SVG, and Mermaid Markdown
- Implemented customizable diagram styling (colors, borders, profiles), interactive pan/zoom navigation, real-time diagram regeneration on file changes and interactive navigation (pan/zoom) to improve inspection of multi-service Docker setups
- Tools & Languages Used: TypeScript, VS Code Extension API, Mermaid Markdown, YAML parsing

Various other projects github.com/mbofos01

Skills & Tools

Programming Languages: Python, Java, C, C#, C++, Bash, JavaScript, TypeScript, SQL, CUDA, PHP

Libraries/Frameworks: Django, Dash, Plotly, A-Frame, Keras, PyTorch, Optuna, Pandas, OpenCV, OpenSSL, React

Technologies: Docker, Docker Compose, Linux, RabbitMQ, Apache Kafka, Apache Spark, Git, Postman, PostgreSQL, Maven, Redis, Grafana, Nginx

General Tools: MS Word, MS PowerPoint, MS Access, Kanban Flow, DBeaver, VS Code, Wireshark

Spoken Languages: Greek (Native), English (Proficient), French (Basic), Dutch (Minimal knowledge)

Certifications

Oracle: Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate	**View Certificate**
Oracle: Oracle Cloud Infrastructure 2025 Certified Foundations Associate	**View Certificate**
IBM: Hands-on Introduction to Linux Commands and Shell Scripting	**View Certificate**
Google: Crash Course on Python	**View Certificate**
Google: Foundations of User Experience (UX) Design	**View Certificate**
Google Cloud Skills Boost: Introduction to Generative AI	**View Certificate**
HackerRank: SQL (Basic)	**View Certificate**
HackerRank: Rest API (Intermediate)	**View Certificate**