Nikolaos Iliakis

Kongens Lyngby, Capital Region, Denmark
nickiliak847@gmail.com — +45 9148 2938
linkedin.com/in/nikolaosiliakis — github.com/nickiliak

Professional Summary

Master's student in **Human-Centered Artificial Intelligence** at the Technical University of Denmark with a Computer Science BSc. More than one year of professional experience in software engineering, primarily using Python and C#, with exposure to multiple other languages through academic and personal projects. Experienced in large-scale software development, including implementing features, writing tests, and setting up CI/CD pipelines. Currently specializing in machine learning, having built several applied projects in this field.

Professional Experience

ORamaVR Nov 2023 – Nov 2024
Software Engineer, "REVIRES-Med" Horizon 2020 Project Hybrid, Iráklion, Greece

- Developed VR simulation features using C# (frontend/backend) and Python (unit testing, automation).
- Co-created and launched the **MAGES NXT SDK** (100+ users in the first week).
- Integrated CI/CD pipelines and containerized builds with Docker for Android and macOS testing.
- Prepared large datasets for 3D model and VR room generation.
- Authored Sphinx/reST documentation and resolved 30+ pre-release bugs.

ORamaVR Sep 2023 – Oct 2023
Volunteer Quality Assurance Tester On-Site

- Identified and documented 50+ performance and UX issues in VR products.
- Reported and managed bugs using JIRA.

Education

DTU - Technical University of Denmark Feb 2025 – Present
Master's Degree in *Human-Centered Artificial Intelligence*

University of Crete, Department of Computer Science Sep 2019 – Sep 2023
Bachelor's Degree in *Computer Science* (Grade: 7.53/10)

- Thesis: Modeled the spatiotemporal spread of COVID-19 in an airport using Unity VR and Python-based data visualization.

Projects

Gym Progress Tracker App Personal

- Built a full-stack workout tracker with **Python** libraries **Streamlit** (frontend), **FastAPI** (backend), and a database with **MySQL**.
- Containerized services with **Docker**, enabling one-command deployment.
- Implemented analytics for exercise distribution and weight progression.
- Set up automated testing with **Pytest** and **CI** via GitHub Actions.

WallHeating Simulation Optimization DTU

- Simulated steady-state heat distribution in **4,571 building floorplans** using the Jacobi method in **Python**.
- Parallelized computations with **multiprocessing** (static and dynamic scheduling) to reduce processing time from 19.6h to 2.1h.

- Accelerated CPU computations with **Numba JIT** and implemented custom **CUDA kernels** for GPU, achieving significant speed-ups.
- Analyzed thermal metrics including mean room temperature, temperature variance, and comfort thresholds, producing reproducible visualizations and CSV summaries.

Customer Segmentation with Supervised Learning DTU

- Built ML pipelines with Python (**scikit-learn**, **NumPy**) for shopper classification and spending prediction.
- Compared models via cross-validation and statistical tests; achieved a performace of 28% RMSE reduction.

Point-Cloud to 3D Mesh Generator and Gravity Simulation Open-Source

- Added watertight mesh generation and basic gravity simulation to the open-source **Elements** graphics library (**Python**, **Open3D**).

C Shell Interpreter University of Crete

- Created a Unix-style shell in C with interactive prompt and current-directory display.
- Implemented command execution via `fork()` + `execvp()`, piping, and I/O redirection.
- Solidifed knowledge of the **Linux bash terminal**.

Retro "Zelda II" Clone University of Crete

- Recreated core mechanics of the classic side-scroller using **C++** and **SDL** in a 3-person team.
- Implemented movement, enemy AI, tile-based collision, and a basic level system.

Compiler and Virtual Machine for Alpha Language University of Crete

- Built a complete compiler and VM in **C/C++** for the Alpha programming language.

Lancaster University Website Recreation University of Crete

- Recreated Lancaster University's website using **HTML/CSS**.
- Implemented basic **JavaScript** for functionality.

Skills

- **Languages:** Python, C++, C#, C, Java, SQL, reST, CSS, JavaScript, HTML
- **Technologies:** Unity, Git, Docker, Sphinx
- **ML & Data:** scikit-learn, NumPy, cross-validation, regression/classification, hypothesis testing
- **Interests:** Generative AI, Scientific Computing, Cloud Platforms, Data Visualization

Hobbies

- Bodybuilding and fitness
- Chess, running, global statistics
- History