

# PETROS PAPAGIANNIS

he/him



## Personal info

\* \*\*/\*\*/\*\*\*\*  
☎ +30 \*\*\*\*\*  
✉ petros.t.papagiannis@gmail.com  
📍 \*\* \*\*\*, Patra, Greece

## Links

🌐 papagiannispetros.github.io  
🔗 /PapagiannisPetros  
🌐 /PetrosPapagiannis

## Skills

🔧 **Programming Languages:** C, C++, Python, Bash, PHP, JavaScript, TypeScript, Node.js, C#, Java  
🗄️ **Databases:** MySQL, SQLite  
🔨 **Web Development:** HTML5, CSS3, Bootstrap, Responsive Design  
📐 **UI/UX & Design:** Figma, Adobe XD, Wireframing, Prototyping  
📊 **Data Science & AI:** TensorFlow, PyTorch, scikit-learn, Pandas, NumPy  
📦 **Tools & Platforms:** Git, GitHub, Docker, Jupyter Notebook  
⚙️ **Operating Systems:** Linux (Ubuntu, Debian, Kali), Windows  
💻 **Software:** Visual Studio Code, MATLAB, IntelliJ IDEA, Microsoft Office, LibreOffice, Adobe Acrobat, Airflow DAG

## WORK EXPERIENCE

### \*\*\*\*\* IKE

#### Part-time, Junior Developer

JUN 2025 AND ONGOING

- Full-Stack Development
  - Backend APIs and server-side logic
  - Frontend integration and responsive UI
  - End-to-end UI/UX design and implementation
- Application Architecture
  - Database design and management
  - API design and integration
  - Performance optimization and scalability
  - Design and management of DAG-based data workflows
  - Data pipelining and ETL processes
- AI Large Language Models
  - Integration of cutting-edge LLMs such as GPT and Gemini
  - Development of context-aware conversational AI systems
  - Fine-tuning and prompt engineering for domain-specific applications
  - Implementation of RAG (Retrieval-Augmented Generation) and NLQ (Natural Language Query) systems
  - Machine Learning forecasting and predictive modeling
- Web Mobile Interfaces
  - User-centric design and usability testing
  - Interactive and dynamic web components
- Collaboration Tools
  - Version control (Git) and CI/CD pipelines
  - Agile workflow and team coordination

## LECTURING EXPERIENCE

### Computer Engineering & Informatics Department (CEID) – University of Patras

Teaching Assistant - Differential Equations & Applied Mathematics

OCT 2024 FEB 2025

- Assisted in delivering lectures and facilitating practical problem-solving sessions.
- Provided one-on-one support to students on assignments and projects.
- Contributed to the preparation and grading of coursework and exams.

### Lab Instructor - Mathematical Foundations in Computer Science

OCT 2024 JUN 2025

- Designed and conducted laboratory sessions on algorithms, formal logic, and proofs.
- Guided students in applying theoretical concepts to practical exercises.
- Assessed lab submissions and provided detailed feedback for improvement.

Computer Engineering & Informatics Department,  
University of Patras  
(Undergraduate)

PATRAS, GREECE    OCT 2022 AND ONGOING  
Current Grade: \*\*\*

In-depth study: Artificial Intelligence - Machine Learning  
Subsidiary subject: Cyber Security

School Education, High school

KOZANI, GREECE    SEP 2019 – JUN 2022  
Degree: Secondary school leaving certificate  
Grade: \*\*\*

Elective Courses: Mathematics, Physics, Chemistry




School Education, Middle school

KOZANI, GREECE    SEP 2016 – JUN 2019  
Degree: Secondary school leaving certificate  
Grade: \*\*\*  
  
Elective Courses: Mathematics, Physics, Chemistry

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Languages

-  Greek (Mothers tongue)
-  English (C2)
-  French (B2)

Professional Summary

Motivated and versatile Computer Engineering undergraduate with strong expertise in backend, frontend, and full-stack development. Experienced in designing APIs, building scalable web applications, and crafting user-centered interfaces. Skilled at bridging technical and creative solutions, with a passion for problem-solving, continuous learning, and delivering high-quality software.

Key Strengths

-  Problem-Solving
-  Team Collaboration
-  Adaptability
-  Project Management
-  Full-Stack Development
-  Analytical Thinking

Certificates and Participations

2016	Mathematics Award "Efklidis"
2023	Participation in Best Patras Bootcamp for Full-Stack Development
2024	Teaching Assistant Differential Equations and Applied Mathematics
2025	Lab Instructor Mathematical Foundations in Computer Science
2025	Reference: Prof. Athanasios Andrikopoulos, CEID, University of Patras
Recommendation letter available upon request.	

AI-Driven BI Assistant

Full-stack web chatbot for business intelligence dashboards, built with a Python backend and responsive frontend, powered by Gemini LLM. Designed for supervisors, it uses Natural Language Queries (NLQ) to retrieve and interpret BI data, dynamically generating tables, charts, and visual insights. Features include contextual prompt handling, real-time data interaction, and seamless dashboard integration for an interactive and data-driven supervision experience.

Python, HTML, CSS, Javascript, Docker, Voiceflow, OpenAI API, MySQL, AJAX, Plotly, Gemini LLM

Tourism Sites Chatbot - Local RAG

Full-stack web chatbot for tourism websites, built with a Python backend and responsive frontend, powered by OpenAIs GPT-3.0. Uses a local RAG system with vector embeddings to retrieve relevant information from a curated knowledge base, providing real-time, context-aware answers about tourist attractions, events, travel tips, and sightseeing recommendations. Features include custom prompt engineering, dynamic response handling, and seamless website integration for an engaging tourism experience.

Python, HTML, CSS, Javascript, Docker, Voiceflow, OpenAI API, MySQL, AJAX, Gemini LLM

ML Forecasting Pipeline - Airflow & BigQuery

Full-stack machine learning pipeline for time-series forecasting, built with Python and orchestrated using Airflow DAGs. Retrieves and preprocesses large-scale data from BigQuery, trains predictive models, and generates forecasts with automated scheduling and monitoring. Features include modular pipeline design, real-time model evaluation, and seamless integration with dashboards for actionable business insights.

Python, MySQL, Airflow, BigQuery, Pandas, NumPy, ARIMA, Plotly

Public Services Chatbot

Full-stack conversational AI system for public administration, combining Natural Language Query (NLQ) and Context-Aware Generation (CAG) with the Gemini 2.5 Flash LLM. Includes a complete back office for usage statistics, query analytics, and automated data updates. Delivers accurate, context-rich responses while ensuring the knowledge base stays continuously refreshed for reliable, up-to-date information access.





Python, HTML, CSS, Javascript, Docker, Voiceflow, OpenAI API, MySQL, AJAX, Gemini LLM

Tourism Sites Chatbot - Voiceflow

Full-stack web chatbot for tourism websites, built with a Python backend and a responsive frontend, powered by OpenAIs GPT-3.0. Developed using Voiceflow, it leverages AI and conversational design to deliver real-time, context-aware answers about popular tourist attractions, local events, travel tips, and sightseeing recommendations. Features include custom prompt engineering, dynamic response handling, and smooth website integration, offering visitors an engaging and informative tourism experience.

Python, HTML, CSS, Javascript, Docker, Voiceflow, OpenAI API, MySQL, AJAX, Voiceflow

Hobbies

-  Basketball, Gym, Swimming
-  Exploring emerging technologies, Freelance IT projects
-  Traveling and cultural exchange
-  Reading tech blogs and scientific articles

## Collaborative Thesis Management System

CEID 2025

A Node.js and MySQL web application designed to streamline the administrative process of university diploma theses. Supports students, professors, and administration roles for managing thesis topics, supervision, committee approvals, progress tracking, and final evaluations. Enables collaborative workflow with topic assignment, multi-member committee agreement, document sharing, presentation scheduling, and grading, all within a unified platform.

HTML, CSS, Javascript, NodeJS, MySQL, Figma

## UniBook - Collaborative Note Sharing Platform for Students

CEID 2025

Cross-platform desktop app built with Python to enhance student collaboration. Provides a centralized platform for sharing course notes, discussions, and study organization, supporting both student and admin roles with features like uploads, comments, chat forums, and admin moderation.

Python, QTCreator, Robustness Analysis, Project Management

## Multi-Core Process Scheduler for Unix (FCFS, RR, RR-AFF)

CEID 2025

A Unix-based multi-core process scheduler implemented in C, supporting FCFS, Round Robin, and Round Robin with Processor Affinity. This project explores CPU scheduling algorithms, multi-core management, and Unix process control using fork, exec, and signals, with detailed performance tracking for each policy.

C, Unix, Multi-core Process Scheduling, Scheduling Algorithms

## Multi-Core Process Scheduler & OS Utilities

CEID 2024

Unix-based project developed in C and Shell scripting, featuring multiple scheduling algorithms (FCFS, RR, SJF, and more), process synchronization using semaphores, memory management simulation, and passenger data processing with awk/sed/grep. It simulates a survival mission with boats and passengers.

C, Shell scripting, Semaphores, Memory Management, Scheduling