

Emmanouil Georgios (Akis) Lionis

Amsterdam, Netherlands | akislionis@gmail.com | +30 697 951 92 43 | akislionis.github.io

linkedin.com/in/akis-lionis | github.com/lionisakis

Education

University of Amsterdam, MSc in Artificial Intelligence Sept 2023 – Current

- GPA: 8.17/10.0
- **Relevant Coursework:** Deep Learning, Natural Language Processing 1, Information Retrieval 1, Recommender Systems, Project Artificial Intelligence A: Global Embeddings in Learned Sparse Retrieval for Long Documents, Reinforcement Learning, Information Retrieval 2 (ungraded)
- **Thesis:** Learned Sparse Retrieval for Long Document by passing information from passage to passage.
Under progress and conducted as internship with **TKH Group**
Advisors: PhD Dylan Ju, Angelos Nalmpantis, Prof. Andrew Yates and Prof. Sean MacAvaney

European Summer School on Information Retrieval (ESSIR) Jul 2024

- Program: ESSIR Summer School (Week-long)
- Focus Areas: Information Retrieval (IR), Recommender Systems (RecSys), Natural Language Processing (NLP), Machine Learning (ML), Artificial Intelligence (AI), Data Science (DS)
- Experience: Gained theoretical knowledge and hands-on experience through lectures, interactive sessions, and workshops led by experts
- Key Emphasis: Modern teaching approaches and the development of innovative curricula for these disciplines

National and Kapodestrian University of Athens, BSc in Informatics and Telecommunications Oct 2019 - Jul 2023

- GPA: 8.21/10.0
- **Majors:**
 - Foundations of Computer Science
 - Data and Knowledge Management
- **Thesis:** Creating Ontology with the help of a ChatBot.
Advisors: Post Doc Eleni Tsalapati, Prof. Manolis Koubarakis

Universität Koblenz - Landau, Koblenz, Germany, MSc in Informatics and Data Science Oct 2021 – Feb 2022

- Completed a semester of academic study focused on international exchange and cross-cultural collaboration.
- Enhanced global perspectives through collaboration with peers and faculty from diverse backgrounds.
- Erasmus+ scholarship

Experience

Teaching Assistance, University of Amsterdam – Amsterdam, Netherlands Jan 2024 - Jan 2024

- Supervised and graded student groups in the AI MSc course on *Fairness, Accountability, Confidentiality, and Transparency in AI*, providing guidance on project work and evaluating performance.

Software Engineer, Twiki – Rotterdam, Netherlands Dec 2023 - Dec 2024

- Designed and implemented an API schema for the system's backend using Flask.
- Developed web scrapers to interact with API endpoints efficiently.
- Collaborated with clients to identify system issues and deliver tailored solutions.

Data Assurance Engineer, Optasia – Athens, Greece Dec 2023 - Dec 2024

- Analyzed data integrity and completeness at Optasia, ensuring high-quality data standards.
- Utilized technologies including PySpark, Python, and SQL for data processing and validation.

Personal Academic Tutor – Athens, Greece

Feb 2020 - Jul 2023

- Tutored a BSc student with their subjects
- Courses: Data Structures, Object Orientation, SQL, Numerical Analysis

Volunteering

Project Manager, ESN KAPA Athens – Athens, Greece

Jul 2023 - Dec 2024

- Volunteered with the Erasmus Student Network (ESN) at the National and Kapodistrian University of Athens.
- Coordinated and supervised projects, fostering collaboration and supporting international student initiatives.

Web Project Administrator, ESN KAPA Athens – Athens, Greece

Sep 2022 - Jul 2023

- Volunteered with the Erasmus Student Network (ESN) at the National and Kapodistrian University of Athens.
- Site management and technology development for the organization.
- The technology used: API, Python, Excel, Google account system.

Projects

Reproducibility Paper for ECIR 2025

Jul 2024 - Oct 2024

- Reproduced and extended a **SIGIR 2024** paper.
- Submitted to **ECIR 2025** and waiting for results.
- Tools Used: Pyspark, Hydra, Python

Global Embeddings in Learned Sparse Retrieval for Long Documents

Jul 2024

- Developed a model as part of the *Artificial Intelligence A* project in my Master's studies, designed to process, encode, and create dependency of passages from long documents, enhancing the relevance score of the document in response to a given query.
- Employed the RoBERTa encoder to encode the passage and used an LSTM network to generate the global embedding.
- Tools Used: Pyspark, Hydra, Python

AI-Artificial-Intelligence projects

github repository

- Computer-controlled snake attempts to solve the game using Search Algorithms (BFS, DFS, UCS, A*, Normal Hamiltonian Cycle) for navigation
- Language: Python

ClownPunk

github repository

- Developed a game entirely from scratch within just 3 days for the Ludum Dare 49 game jam.
- Submitted to the event as Clownpunk, achieving 10th place in the Theme category.
- Tools Used: C#, Unity

Train Rush

github repository

- Created a fully functional game within a 3-day timeframe for the Ludum Dare 49 game jam.
- Participated with the submission Clownpunk.
- Tools Used: C#, Unity

Skills

- **Programming Languages:** Python, C++, C, Java, Objective-C, C#, SQL, JavaScript
- **Technologies:** Pytorch, Hugging Face, Git, Github, Pandas, NumPy, SQL, Pyspark, Linux, Windows
- **Soft Skills:** Team Player, Listener, Communicative, Positive, Critical Thinker, Out of the box Thinker, Work Enthusiast, Work Ethic, Time organized
- **Language:** Greek (Native), English (Proficient), German (upper intermediate), Spanish (beginner)