Δ M
Machine Learning Engineer

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SUMMARY

Δ ΔO Driven by a passion for technology, AI, and innovation, I am a Machine Learning Engineer holding a degree in Electrical & Computer Engineering from the National Technical University of Athens. My journey, marked by achievements in AI, robotics, innovations for social good, and advocacy for women in STEM, reflects my vision to inspire and transform our society.

EDUCATION

2024-2025 **Translational Engineering in Health and Medicine | MSc** — **National Technical University of Athens, Greece**
The program combines advanced studies in biomedical data science, artificial intelligence, and healthcare robotics with entrepreneurial and leadership training, preparing graduates to drive impactful advancements in health and medicine.

2017 - 3/2024 **Electrical and Computer Engineer | MEng | Integrated 5 years degree** — **NTUA, Greece**
Major in Computer Science | GPA: 8.16/10 | Major GPA: 9.02/10
Diploma thesis supervisor: Prof. Petros Maragos
Volunteering in many student organizations, including Board of European Students in Technology, SPIN - Space Innovation, Prom Racing and organized conferences, including ICASSP 2023 and ISBI 2024.
Advocated for gender equality in STEM as a Global Ambassador of Women in Tech Global Conference.

RESEARCH EXPERIENCE

9/2024-now **Researcher** — **University of Pennsylvania**
Supervised by Prof.Davatzikos
Under the guidance of Professor Davatzikos, I am currently engaged in a research project focused on the classification of glioblastoma pseudo-progression using multiparametric MRI data. My work involves leveraging deep learning methods to differentiate true tumor progression from treatment-related changes, which can often mimic tumor growth in imaging.

3/2022 – 3/2024 **Diploma Thesis Research Intern | Video Question Answering with scene-graphs** — **NTUA, Deeplab**
Co-supervised by Prof.Maragos, Vasilis Pitsikalis, Markos Diomataris and Dimitris Mallis
For my diploma thesis, I enhanced Video Question Answering (VQA) by utilizing scene-graphs instead of traditional video frames, chosen for their efficiency and ability to encapsulate compact, comprehensive information. I developed a pipeline that processes videos into hyper-graphs, extracting graph embeddings for each video to accurately answer questions. This approach increased accuracy scores and produced more semantic results compared to state-of-the-art methods.

7/2023 – 9/2023 **Machine Learning Engineer | Y Combinator & a16z funded startup** — **Kaedim**
Developed and published 5 new features related to 3D image reconstruction, automatic texturing, and machine-learning based image matting. Implemented 2 iterations to enhance existing features. Achieved a 7% increase in reconstruction speed using the implemented features.

PROJECTS

2021-2024 **AIris**
AIris is an AI-powered wearable device I developed that provides environmental awareness and interaction capabilities to visually impaired users. Starting from a university project, AIris has won 1st place in Plaisiobots: The Race, 2nd Place in NTUA Biotech Day and was also presented in Fosscomm 2021. Our work was published in IEEE's BioRob 2024 Conference and we recently got selected for the EIT Digital Ventures Incubation Program 2024, securing our first funding for further development.

9/2024- now **IEEE EMBS Student Mentoring Program**
Being selected for this program, I got partnered with Dr. E Priyaa from Sri Sai Ram Engineering College, India. Together we are developing a novel methodology for Alzheimer's detection using deep learning on brain MRIs.

PUBLICATIONS

2024 **AIris: An AI-powered Wearable Assistive Device for the Visually Impaired** — **IEEE's BioRob 2024**
D. D. Brilli, E. Georgaras, S. Tsilivaki, N. Melanitis, and K. Nikita
In this paper, we introduce AIris, an AI-powered wearable device that provides environmental awareness and interaction capabilities to visually impaired users. AIris combines a camera, NLP and AI to enable users to receive real-time auditory descriptions of their surroundings.

2025 **GHR-VQA: Graph-guided Hierarchical Relational Reasoning for Video Question Answering** **EUSIPCO 2025 Submission**
D. D. Brilli, D.Mallis, V.Pitsikalis, and P.Maragos
In this paper, we propose a novel framework for Video Question Answering that incorporates scene graphs to capture intricate object relationships and interactions within video sequences.

AWARDS & ACHIEVEMENTS

2024 **Finalist for Incube Program**
I was selected as one of the top 30 young innovators globally to participate in the prestigious Incube Challenge, organized by ETH Zurich. This two-week-long program brings together talented individuals from around the world to collaborate on cutting-edge innovation challenges posed by leading companies.

2023 **Finalist, Greek International Women Awards**
Finalist in the Young Star category, recognizing contributions to technology and advocacy for Greek women in STEM globally.

2023 **1st Place, Sterea Hackathon**
Finalist with the Gaia CO_2 project, focusing on neutralizing carbon emissions using AI tools.

2022 **1st Place, National Innovation Robotics Contest**
Led the development of AIris, winning 1st place for this innovative AI-powered wearable health device for the visually impaired. AIris uses state-of-the-art machine learning models, integrating a camera, earphones, and a microcomputer, for environment interaction through natural language and vision processing.

2021 **2nd Place in NTUA Biotech Day**
Achieved 2nd place for excellence in technological innovation and social impact with AIris.

INVITED TALKS & PRESENTATIONS

30/5/2024 **ISBI Satellite Event**
I was honored to be invited to share insights on the journey of my startup, Glimpse AI, and its flagship product, AIris. What began as an undergraduate student project has since evolved into a distinguished venture, earning recognition through national and international awards.

22/4/2024 **Institute of Informatics & Telecommunications - NCSR Demokritos**
I was honored to be invited to present my diploma thesis work findings at the Complex Networks Analysis Group. I shared my work and sparked an interesting discussion about graphs and their application to computer vision tasks, like Video Question Answering.

11/11/2020 **Weekly Women Entrepreneurship 2020 & 2024**
I was honored to be invited as a speaker twice. My talk focused on representing student nascent entrepreneurship, showcasing the journey of building a venture from the ground up as a student.

13/11/2021 **FOSSCOMM**
I presented AIris, which was at the time a conceptual project with an ongoing prototype development. My presentation focused on the innovative aspects of AIris and its potential applications.

TEACHING EXPERIENCE

9/2021-7/2024 **Robotics Coach** **The Inventors Academy of Robotics & Innovation**
Using agile methods like scrum and kanban, I led my team to many awards, including 2nd place nationally in March 2024. Our team is among the top 40 First Tech Challenge teams globally and competed in the Maryland Tech Invitational 2024.

11/2022 – now **AI for teenagers | Workshops for high school students** **Herakleidon Museum & Scify**
Introducing high school students to artificial intelligence and its applications, I have motivated more than 1000 teenagers into STEM and sparked an interest in technology.

SKILLS

Python {Pytorch, Tensorflow, Pandas, Numpy, SciPy, Transformers, Sci-kit, ROS etc}, **MATLAB**, C/C++, Bash, Vim, HTML, CSS, Javascript, SQL, PHP, Kaldi