Alexandros Delitzas

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EDUCATION

ETH Zurich Zurich, Switzerland

Master of Science in Computer Science Sep. 2021 - Dec. 2023

- Specialization: Machine Intelligence

Aristotle University of Thessaloniki (AUTh)

Thessaloniki, Greece Sep. 2014 - Apr. 2020 5-year Diploma in Electrical and Computer Engineering (equivalent to integrated BSc/MEng)

- Thesis: "Understanding website aesthetics using deep learning"

- Grade: 9.36/10.00 (Excellent), Ranking: 4th out of 369 (Top 1%)

Research Experience

Research project

Semester thesis

Undergraduate researcher

Computer Vision and Geometry Group, ETH Zurich

Zurich, Switzerland Master thesis May 2023 - present

- Working on 3D Scene Understanding with a focus on functionality understanding, affordance grounding and part mobility estimation
- Created a lightweight web-based tool that enables the fine-grained semantic annotation of 3D point clouds
- Supervised by Francis Engelmann and Prof. Marc Pollefeys

Data Analytics Lab, ETH Zurich

Zurich, Switzerland Feb. 2023 - May 2023

- Worked on 2D/3D vision+language pre-training methods for visual reasoning downstream tasks in 3D scenes

- Supervised by Sotiris Anagnostidis, Gregor Bachmann and Prof. Thomas Hofmann

Computer Vision Lab, ETH Zurich

Zurich, Switzerland Sep. 2022 - Feb. 2023

Thessaloniki, Greece

Feb. 2019 - Feb. 2020

- Worked on diffusion models for the task of 3D Mesh Deformation Transfer

- Supervised by Hao Tang, Prof. Radu Timofte and Prof. Luc Van Gool

Intelligent Systems and Software Engineering Labsgroup, AUTh

- Developed "Calista", a deep learning powered engine which measures the aesthetics of a webpage in a few seconds requiring only a URL as an input

- Developed deep learning models for webpage aesthetics assessment which present high correlation to human perception outperforming previous related works
- Developed a web app to collect data through pairwise image comparisons via crowdsourcing and introduced a novel dataset on webpage aesthetics
- Supervised by Prof. Andreas Symeonidis

Automation and Robotics Lab, AUTh

Thessaloniki, Greece

Software Developer / Human-Robot Interaction at ARIADNE Robotics team

Oct. 2016 - Nov. 2017

- Developed a Graphical User Interface providing an intuitive solution for a non-expert user to operate an industrial robotic arm in a dynamic environment (Tech stack: Qt, ROS, C++)
- Integrated Augmented Reality techniques into the Graphical User Interface to facilitate human-robot interaction

Publications

Full list (4 publications) available in my webpage or Google scholar.

Work Experience

COVID-19 Response Greece

Coordinator of the project "Data Analytics" (volunteer)

Thessaloniki, Greece Mar. 2020 - Nov. 2021

- Initiated and spearheaded the development of "Greece Coronavirus API", the first publicly available API providing real-time data on the spread of COVID-19 in Greece for public use and research purposes
- "Greece Coronavirus API" was used for research purposes by Greece's most renowned universities and for visualization/monitoring purposes by Greece's regional governments
- Led a team of 20 volunteers consisting of data scientists and developers
- Collaborated with several research labs on different projects aiming to develop exploratory data analysis tools (among them "CovidDEXP", "OpenDataRef")

Entersoft S.A.

Thessaloniki, Greece

Consultant - Services Department (internship)

Jul. 2017 - Aug. 2017

- Trained on the company's software products (ERP, CRM, Retail, Mobile, E-Commerce and Business Intelligence applications) and gained knowledge on professional software design
- Provided support to customers, analyzed their needs and built product customizations to meet their requirements
- Developed a desktop app which facilitates the management of Microsoft Azure Blob Storage (Tech stack: Qt, C++)

Selected Projects

Self-Stylization and Multi-scale Feature Learning for Road Segmentation

Jul. 2022

Project of the course "Computational Intelligence Lab"

3D Human Pose and Shape Estimation from RGB images

Jun. 2022

Project of the course "Machine Perception"

X-COVID AI Assistant

Jun. 2020

A Web Application to detect signs of COVID-19 presence from Chest X-Rays using Deep Learning

Key achievement: Distinguished as one of the top-16 among 130 proposals by the national #CovidHackGR hackathon which was organized by the Greek Ministry of Digital Governance

Honors

• Scholarship grants from Hellenic Petroleum S.A., John S. Latsis Public Benefit Foundation and Bodossaki Foundation to fund my MSc studies.

Jul. 2021

 Honored by the President of Greece for my volunteering contribution through technological innovations against the COVID-19 pandemic Jul. 2020

• Graduated with Honors – Ranked among the Top 1% of the class

Apr. 2020

INVITED TALKS

• Keynote Speaker at the Electrical and Computer Engineering Student Conference of Greece (ECESCON 12). Topic: "Open Data in the fight against COVID-19"

Apr. 2021

SKILLS

- Programming/Scripting languages: Python, C/C++, JavaScript, Matlab, Java, R
- Machine Learning: Pytorch, keras, scikit-learn, numpy, pandas, OpenCV, Open3D
- Web Development: MERN stack (MongoDB, Express, React, Node.js), Three.js, HTML, CSS, REST API modelling
- Databases: SQL language, MySQL, MongoDB
- Parallel Programming: CUDA, pthreads, MPI

LANGUAGES

• Greek: native • English: fluent (C2) • German: intermediate (B1)