

# Alexandros Delitzas

📍 Zurich, Switzerland

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## EDUCATION

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- ETH Zurich** Zurich, Switzerland  
Master of Science in Computer Science Sep. 2021 - Apr. 2024
- Specialization: Machine Intelligence, Visual Computing
  - Expected grade: 5.52/6.00
- Aristotle University of Thessaloniki (AUTH)** Thessaloniki, Greece  
5-year Diploma in Electrical and Computer Engineering (equivalent to joint BSc/MEng) Sep. 2014 - Apr. 2020
- Thesis: “Understanding website aesthetics using deep learning”
  - Grade: 9.36/10.00 (*Excellent*), Ranking: 4<sup>th</sup> out of 369 (Top 1%)

## RESEARCH EXPERIENCE

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- Computer Vision and Geometry Group, ETH Zurich** Zurich, Switzerland  
Master thesis May 2023 - present
- Working on functionality and affordance understanding in 3D scenes towards functional 3D replicas
  - Created a lightweight web-based framework that enables the fine-grained semantic annotation of high-resolution 3D point clouds
  - Supervised by Francis Engelmann and Prof. Marc Pollefeys
- Data Analytics Lab, ETH Zurich** Zurich, Switzerland  
Research project 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  
Semester thesis Sep. 2022 - Feb. 2023
- 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 Labgroup, AUTH** Thessaloniki, Greece  
Undergraduate research assistant Feb. 2019 - Feb. 2020
- Developed “Calista”, a deep learning powered engine which automatically measures the aesthetics of a webpage requiring only a URL as an input
  - Developed deep learning models for webpage aesthetics assessment which present high correlation to human perception
  - 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 an AR-enhanced 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++)
  - Supervised by Prof. Zoe Doulgeri

## PUBLICATIONS

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\* indicates equal contribution

1. **A. Delitzas**, A. Takmaz, F. Tombari, R. Sumner, M. Pollefeys, F. Engelmann, “SceneFun3D: Fine-Grained Functionality and Affordance Understanding in 3D Scenes”, Conference on Computer Vision and Pattern Recognition (CVPR), 2024. (**Oral presentation**)
2. **A. Delitzas\***, M. Parelli\*, N. Hars, G. Vlassis, S. Anagnostidis, G. Bachmann, T. Hofmann, “Multi-CLIP: Contrastive Vision-Language Pre-training for Question Answering tasks in 3D Scenes”, British Machine Vision Conference (BMVC), 2023. (**Oral presentation**)
3. M. Parelli\*, **A. Delitzas\***, N. Hars, G. Vlassis, S. Anagnostidis, G. Bachmann, T. Hofmann, “CLIP-Guided Vision-Language Pre-Training for Question Answering in 3D Scenes”, Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2023.
4. **A. Delitzas**, K. Chatzidimitriou, A. Symeonidis, “Calista: A deep learning-based system for understanding and evaluating website aesthetics”, International Journal of Human-Computer Studies, 2023.
5. C. Kechris\*, **A. Delitzas\***, V. Matsoukas\*, P. Petrantonakis, “Removing Noise from Extracellular Neural Recordings Using Fully Convolutional Denoising Autoencoders”, International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 2021.

## WORK EXPERIENCE

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**COVID-19 Response Greece** Thessaloniki, Greece  
Coordinator of the project “Data Analytics” (volunteer) Mar. 2020 - Nov. 2021

- 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 (utilized for research purposes by Greek universities and for monitoring purposes by regional governments)
- Led a team of 20 volunteers consisting of data scientists and developers
- Collaborated with several research labs on 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

- Analyzed customers’ needs and built customized Business Intelligence solutions to meet their requirements
- Developed a desktop app which facilitates the management of Microsoft Azure Blob Storage (Tech stack: Qt, C++)

## SELECTED PROJECTS

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**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

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- 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

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- *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

## ACADEMIC SERVICES

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- **Workshop organizer:** OpenSUN3D at CVPR '24
- **Conference reviewer:** CVPR

## SKILLS

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- **Programming/Scripting languages:** Python, C/C++, JavaScript, Matlab, Java, R
- **Machine Learning/Computer Vision:** Pytorch, keras, scikit-learn, numpy, OpenCV, Open3D, MeshLab, Blender
- **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

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• **Greek:** native

• **English:** fluent (C2)

• **German:** intermediate (B1)