ATHANASIOS CHARISOUDIS

LINKEDIN   *linkedin.com/charisoudis*
GITHUB   *github.com/charisoudis*
EMAIL   *charisoudis@outlook.com*
VCARD   *charisoudis.com*

NATIONALITY   BORN
GREEK   07/1994

EDUCATION

KTH Royal Institute of Technology, Sweden
2021 – 2024 (expected)

M.Sc. in Machine Learning
MASTER THESIS: *Monocular Dynamic Motion Capture: A Regression-Optimization Hybrid Approach*
Supervisor: Prof. Hedvig Kjellström
Improved 3D motion reconstruction by combining global motion regression with hand-crafted optimization for enhanced accuracy on dynamic setups. [Report]

Aristotle University of Thessaloniki, Greece
2015 - 2021

Diploma in Electrical and Computer Engineering
FINAL (C)GPA: 8.88/10.00

DIPLOMA THESIS: *Generative Adversarial Networks for pose and style selection in fashion design applications*
Supervisors: Prof. Pericles Mitkas, Dr. Antonios Chrysopoulos
Developed GAN models for realistic clothing transformations on people in fashion images. Evaluated the performance of pix2pix, CycleGAN, StyleGAN, and MUNIT architectures. [Report in Greek]

EXPERIENCE

Hochschule Luzern
Rotkreuz, Switzerland
Arp 2024 – now

Research Engineer
Advisor: Prof. Aljosa Smolic (Projects: TRANSMIXR, FaVoRe)
Working on volumetric 3D representations for humans. Currently trying to make Gaussian splats train fast and deform realistically.

MLReproHub
Stockholm, Sweden
Mar 2023 – now

Researcher
Reproducing state-of-the-art Machine Learning papers together with two fellow scholars from MSc in Machine Learning at KTH.

KTH Royal Institute of Technology
Stockholm, Sweden
Feb 2022 – Feb 2023

Research Engineer
Advisor: Prof. Hedvig Kjellström (HiSS Project)
Working on 3D Computer Vision techniques to model human interactions. 3D human avatars are among the interesting directions of this work.

Teaching Assistant
Courses: (DD2380) Artificial Intelligence, (DD2434) Advanced Machine Learning, (DD1420) Foundations of Machine Learning

SCANIA Group
Södertälje, Sweden
Jun 2022 – Sep 2022

Research Internship, Autonomous Systems R&D
Worked on Data-Driven Scenario-Based Validation (SBV) of Autonomous Driving S/W stacks. From 3D Deep-Learning based perception to traffic scenario identification and edge case analysis.

Eurotechnik Ltd
Thessaloniki, Greece
Mar 2015 – Nov 2020,
Jul 2023 – Aug 2023

Full Stack Developer, IT
Created a fully functional CRM + ERP web-app, *eurotechnik.gr* and its custom-made CMS, all in Laravel. Initiator of the Eurotechnik Web Services department, *ews.eurotechnik.gr*, hosting internal operation web apps, including a CRM, ERP and OMS, both web based.

PUBLICATIONS

- **[Re] Masked Autoencoders Are Small Scale Vision Learners: A Reproduction Under Resource Constraints**
  Athanasios Charisoudis, Simon Ekman von Huth, Emil Jansson
  ML Reproducibility Challenge 2022 (poster at NeurIPS 2023)

PROJECTS & ACHIEVEMENTS

NOTABLE PROJECTS

GANS FOR BIOLOGICAL IMAGE SYNTHESIS
2022 | KTH

Reproduced and extended the work of Osokin et al. "GANs for Biological Image Synthesis". Reasoned on the effectiveness of GANs on recreating cellular evolution images under a fluorescence microscope. [Report]

AD-HOC P2P NETWORK WITH RASPBERRY PI'S
2019 | Aristotle University

A threaded C99 app was developed as the semester project in the course "Embedded Systems". A real-time client-server arch was used to show the events. [Link]

FULL STACK DEVELOPMENT
2015-19, 2023 | Eurotechnik

A CRM + ERP developed on top of PHP/Laravel framework. Deployed on dedicated premise. In 2023, an Order Managing System was added employing Operational Research methods (stock cutting and integer programming).

MOOCS

Machine Learning for Inverse Graphics (2023) – Prof. Vincent Sitzmann (*scenerepresentations.org*)
Deep Generative Models (2021) – Prof. Stefano Ermo (*bilibili.com*)
GANs Specialization (2020) – Prof. Sharon Zhou (*coursera.org*)
CS231n: CNNs for Visual Recognition (2019) – Prof. Fei-Fei Li, Justin Johnson (*cs231n.stanford.edu*)
Non-Linear Systems (2018) – Prof. J.J.E. Slotine (*mit.edu/nsl*)

CERTIFICATIONS

GANs Specialization (2020, Coursera) – 3-course specialization on GANs [Link to certificate]
IELTS (2021, University of Cambridge) – overall band score of 8.0/9.0 [Link to results]
IEEEXtreme 10.0 (2016, IEEE) – Finished 429 out of 2500
C2 Proficiency in English (2009, University of Michigan) – overall grade of B [Link to results]

PROGRAMMING SKILLS

VERY STRONG

PYTHON	- Deep Learning (PyTorch), Test-driven Development (TDD), Servers setup and management, ROS, Systems Programming
MATLAB	- Deep Learning (R2020 DL Toolbox), Robotics (Peter Corke Toolbox), Fuzzy Systems, Audio Coding, Adaptive Signal Processing, Control Systems
MySQL	- Created & managed production-ready DB schemas for eurotechnik.gr, intra.eurotechnik.gr, ECESCON 11 and Labyrinth (course project)
PHP	- Strong experience developing PHP + Laravel apps on LAMP stacks
GIT	- Over 600 contributions / year the last 4 years on private and public repositories
DOCKER	- Developing containers and inter-networks for both development and deployment for 3 years

STRONG

C	- Parallel Systems Programming (PTHREADS, OpenMP, MPI), UNIX Systems Programming
JAVA	- Networks Programming (UDP, TCP Sockets, NIO), Algorithms & Data Structures
C++	- Parallel Algorithms, Object Oriented Programming, Numerical Methods

MEDIUM

ASSEMBLY - MIPS32, ATMEL AVR, ARMv6

REFERENCES

Prof. Hedvig Kjellström

Professor in the Division of
Robotics Perception and Learning,
KTH • Thesis Supervisor

E: hedvig@kth.se

(reference sent by email only)

Prof. Hossein Azizpour

Associate Professor in the
Division of Robotics Perception
and Learning, KTH

E: azizpour@kth.se

(reference sent by email only)

Prof. Erik Fransén

Professor in the Division of
Computational Science and
Technology, KTH

E: erikf@kth.se

(reference sent by email only)

Prof. Iolanda Leite

Associate Professor in the
Division of Robotics Perception
and Learning, KTH

E: iolanda@kth.se

(reference sent by email only)

Prof. Pericles Mitkas

Professor at E.C.E. Department
Aristotle University
ISSEL • Thesis Supervisor

E: mitkas@auth.gr

(reference sent by email only)

Prof. Andreas Symeonidis

Professor at E.C.E. Department
Aristotle University
ISSEL

E: symeonid@ece.auth.gr

T: +30 231 099 4344

Prof. John B. Theocharis

Professor at E.C.E. Department
Aristotle University
Robotics and Control Lab

E: theochar@ece.auth.gr

T: +30 231 099 6343