Nikolaos-Antonios Ypsilantis

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LinkedIn: [link] , GitHub: [link] , Google Scholar: [link] ,

Personal Website: [link]

RESEARCH INTERESTS

Large Scale Visual Recognition, Image Representation Learning, Computer Vision,

Deep Learning

EDUCATION

Czech Technical University in Prague (CTU)May. 2022 – present **Ph.D. Student** at the Visual Recognition Group (VRG), Department of Cybernetics, Faculty of Electrical Engineering

- Topic: Scalable representations for universal visual recognition
- Supervisor: Prof. Ondrej Chum

National Technical University of Athens

Oct. 2016 - Feb. 2022

Diploma (5 year joint Master's degree, 300 ECTS) in **Electrical & Computer Engineering (ECE)**

- Average Grade: 8.53/10
- Major: Computer Science
- Specialization: Deep Learning, Computer Vision, Natural Language Processing

Professional Experience Czech Technical University in Prague (CTU) Feb. 2021 - Apr. 2022 Research intern at the Visual Recognition Group (VRG), Department of Cybernetics, Faculty of Electrical Engineering, under the supervision of Assist. Prof. Giorgos Tolias

- Focused on Instance-level Recognition (ILR) task using Deep CNNs
- Involved in the development of a large scale dataset and benchmark for ILR on artworks
- Research on Representation Learning using Deep Metric Learning and Self Supervised Learning

SCHOOL -WORKSHOPS -CONFERENCES (ATTENDED) **27th Computer Vision Winter Workshop (CVWW)** [link] Feb. 2024 Annual meeting of several computer vision research groups located in Graz, Ljubljana, Prague, and Vienna. Took place in Terme Olimia, Slovenia.

International Conference on Computer Vision (ICCV) [link] Oct. 2023 Premier international computer vision event comprising the main conference and several co-located workshops and tutorials. Took place in Paris, France.

Vision and Sports Summer School [link]

July 2022

Attended Vision and Sports summer school in Prague, Czech Republic.

REVIEWING EXPERIENCE Served as reviewer for the following conferences-journals.

- International Journal of Computer Vision (IJCV)
- Computer Vision and Pattern Recognition Conference (CVPR)

TEACHING EXPERIENCE Programming Essentials (CTU [link])

Sept. 2022 - Feb. 2022

Lab teacher of introduction to programming with Python, also responsible for home-

work grading. Course is compulsory in the Bachelor's EECS program and is taught in English.

PUBLICATIONS

Nikolaos-Antonios Ypsilantis, Kaifeng Chen, Bingyi Cao, Mário Lipovský, Pelin Dogan-Schönberger, Grzegorz Makosa, Boris Bluntschli, Mojtaba Seyedhosseini, Ondřej Chum, André Araujo: "Towards Universal Image Embeddings: A Large-Scale Dataset and Challenge for Generic Image Representations" [link]

Proceedings of International Conference on Computer Vision (ICCV) 2023

Nikolaos-Antonios Ypsilantis, Noa Garcia, Guangxing Han, Sarah Ibrahimi, Nanne Van Noord, Giorgos Tolias: "The Met Dataset: Instance-level Recognition for Artwork" [link]

Proceedings of NeurIPS 2021, Track on Datasets and Benchmarks

INVITED TALKS

Computer Vision Winter Workshop (CVWW) 2024

Feb. 2024

Presented work on improving large-scale sketch classification with co-segmentation.

4th Instance-Level Recognition Workshop (ICCV 2021)

Oct. 2021

Presented the Met dataset [link]

TECHNICAL SKILLS

Python, C/C++ Programming Languages Machine/Deep Learning Frameworks PyTorch, Jax/Flax, scikit-learn Data Analysis and Visualization NumPy, SciPy, matplotlib, pandas Scientific Programming MATLAB, GNU Octave Computer Vision Frameworks OpenCV, scikit-image Databases MySQL Version Control Git **Typesetting** LaTeX **Operating Systems** Linux, Windows

Projects

Optional summer project for the DSP course at ECE NTUA

Worked on analysing and implementing the algorithm described in: M. Aharon, M. Elad and A. Bruckstein, "K-SVD: An algorithm for designing overcomplete dictionaries for sparse representation".

SEMINARS ATTENDED

International Particle Physics Outreach Group

Mar. 2016

2019

Masterclass on particle physics for highschool students

LANGUAGES

Greek(Native)

English(Fluent)

- University of Cambridge

Dec. 2013

Certificate of Proficiency in English

C2 Proficiency

- University of Michigan

Nov. 2013

Certificate of Proficiency in English

C2 level

German(Basic)

- Goethe Insitut

Mar. 2015

Goethe-Zertifikat B1

Hobbies

Travelling, Table Tennis, Nature Exploration

REFERENCES Ondrej Chum [link], Giorgos Tolias [link]