

Nikolaos Gkanatsios

Education

- 2011 – 2017 **National Technical University of Athens (NTUA)**, ECE, B.Sc. & M.Sc. (5-year diploma), GPA 9.22/10, 9th among 328 in class, 1st in major.
- 2008 – 2011 **3rd Lyceum of New Heraklion, Attika**, General Lyceum Graduation, General Graduation Grade 19.9/20, General Panhellenic Examinations Grade 19.28/20, top 2% nationwide.

Master thesis

- title *Fine-Grained Action Recognition and Segmentation in Videos Combining Visual and Linguistic Features*
- supervisors Petros Maragos, Professor ECE, NTUA
- description Experimentation with different visual and linguistic features and various fusion and classification methods to improve action recognition and segmentation on the challenging MPII Cooking Activities Dataset.

Research and Professional Experience

- Aug 2018 – **Deeplab**, Machine Learning Engineer, Athens.
- Present
 - Working on high-level semantic image representation, with application to Scene Graph Generation, in collaboration with Prof. Maragos' lab at NTUA.
 - Built an interactive demo of Scene Graph Generation on videos.
 - Built a webpage for real-time inference of visual relationships on wild images.
- Aug 2018 – **Computer Vision and Signal Processing Lab, NTUA**, Research Intern, Athens.
- Present
 - Research on high-level semantic image representation, with application to Scene Graph Generation, in collaboration with Deeplab.
 - Working on the integration of visual-semantic perception to a robotic system for elderly people.
- Mar 2017 – **METIS Cybertechnology S.A.**, Artificial Intelligence Engineer, Athens.
- Jul 2018
 - Designed and developed the whole Natural Language Processing pipeline behind METIS's innovative maritime chatbot.
 - Developed several applications and APIs for METIS's products.
- 2013 – 2018 **Private Tutor**, Athens.
- Courses I have taught include:
- Maths (to high-school students)
 - Physics (to high-school students)
 - Programming (to undergraduate students of ECE)
 - Artificial Intelligence and Natural Language Processing (to postgraduate students of Data Science and Computer Science Schools)

Publications

- 2019 **Attention-Translation-Relation Network for Scalable Scene Graph Generation.** *Scene Graph Representation and Learning, ICCVW 2019.* [PDF Code](#)
- 2019 **Showcasing Deeply Supervised Multimodal Attentional Translation Embeddings: A Demo for Visual Relationship Detection.** *IEEE International Conference of Image Processing, ICIP 2019.* [IEEEExplore](#)

- 2019 **Deeply Supervised Multimodal Attentional Translation Embeddings for Visual Relationship Detection.** *IEEE International Conference of Image Processing, ICIP 2019.* [PDF Code](#)
- 2018 **Metis: A Scalable Natural-Language-Based Intelligent Personal Assistant for Maritime Services.** *24th International Conference on Information and Software Technologies (ICIST 2018).* [Springer](#)

Talks

- September 2019 **ICIP 2019**, Taipei, Taiwan: oral presentation of the paper "Deeply Supervised Multimodal Attentional Translation Embeddings for Visual Relationship Detection".
- October 2018 **ICIST 2018**, Vilnius, Lithuania: oral presentation of the paper "Metis: A Scalable Natural-Language-Based Intelligent Personal Assistant for Maritime Services".
- June 2018 **VOXXEDDAYS Athens**: A Scalable Maritime Platform Providing Services Through an NLP-Based Intelligent Personal Assistant

Honors and Awards

- 2018 **Georgios Kontaxis Award** for being the 1st in 2017 class in Electronics and Systems major, ECE NTUA.
- 2018 **Christos Chalkias Award** for being the 1st in 2017 class in Electronics and Systems major, ECE NTUA.
- 2017 **EESTECH Challenge Athens 1st Prize** for winning the Machine Learning Hackathon, hold by EESTEC Athens and ECE NTUA.
- 2012 **Hellenic Physical Society Award** for making the top 10 in the final round of the Panhellenic Physics Competition for high-school students on a nationwide level.
- 2010 – 2011 **Awards from Hellenic Police** for excellence in high-school classes.
- 2006 – 2011 **High-school awards** for excellence in high-school and pre-high-school classes.
- 2006 – 2011 **High-school awards** for being the 1st in class.

Other Projects

I have run multiple projects on Intelligent Systems, Robotics and Electronics. Some of them can be viewed in my personal webpage <https://nickgkan.github.io>.

Research Interests

Computer Vision, Machine Learning, Interpretable AI / Visual Commonsense, Scene Graph Parsing, Cross-Modal Embeddings

Programming

(Experienced) Python, Matlab / (Basic) C, Javascript (NodeJS), SQL / PyTorch, Keras

Languages

Greek (Native)
 English (Michigan Certificate of Proficiency in English)
 French (Delf B1)

Personal

Basketball, drumming (self-taught), bass guitar (self-taught), ancient Greek literature, music transcription, Greek traditional dancing.