

# 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 Electronics and Systems major
  - Thesis on *"Multimodal Classification and Segmentation of Fine-Grained Activities in Videos"*
  - Thesis supervisor Petros Maragos, Professor, ECE, NTUA
- 2008 – 2011 **3rd Lyceum of New Heraklion, Attika**, General Lyceum Graduation.
- General Graduation Grade 19.7/20
  - General Panhellenic Examinations Grade 19.24/20, top 1% nationwide

## Industrial Research Experience

- Aug 2018 – **Deeplab**, Machine Learning Engineer, Athens.
- Present
- Working on 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.
- Mar 2017 – **METIS Cybertechnology S.A.**, Artificial Intelligence Engineer, Athens.
- Jul 2018
- Designed and developed the whole natural language processing pipeline behind METIS's textbot.
  - Developed several applications and APIs for METIS's products.

## Research Collaborations with Academic Institutions

- Nov 2019 – **Stanford University, Leonidas Guibas Lab**, Stanford, CA, USA, (working remotely).
- Present
- Working with Panos Achlioptas on zero-shot fine-grained language grounding.  
Recommendation can be provided by [Panos](#).
- Nov 2019 – **TU Darmstadt, Intelligent Autonomous Systems Group**, Germany, (working remotely).
- Present
- Working with Dr. Georgia Chalvatzaki and Prof. Jan Peters on a multi-task relational network to improve joint detection of grasping points, class label and shape.  
Recommendation can be provided by [Georgia](#).
- Aug 2018 – **Computer Vision and Signal Processing Lab, NTUA**, Athens, Greece.
- Present
- Research on high-level semantic image representation, with application to scene graph generation, in collaboration with Deeplab.

## Publications

- 2019 **Attention-Translation-Relation Network for Scalable Scene Graph Generation**. Gkanatsios et al., *IEEE International Conference on Computer Vision Workshops, ICCVW 2019*. [PDF](#) [Code](#)
- 2019 **Showcasing Deeply Supervised Multimodal Attentional Translation Embeddings: A Demo for Visual Relationship Detection**. Gkanatsios et al., *IEEE International Conference on Image Processing, ICIP 2019*. [IEEEExplore](#) [Link](#)
- 2019 **Deeply Supervised Multimodal Attentional Translation Embeddings for Visual Relationship Detection**. Gkanatsios et al., *IEEE International Conference on Image Processing, ICIP 2019*. [PDF](#) [Code](#)
- 2018 **Metis: A Scalable Natural-Language-Based Intelligent Personal Assistant for Maritime Services**. Gkanatsios et al., *24th International Conference on Information and Software Technologies (ICIST 2018)*. [Springer](#) [Link](#)

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## Talks / Oral Presentations

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

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## Teaching Experience

- Sep 2019 – Present **CVSP Teaching Assistant**, Athens.
- I co-supervise an undergraduate student's diploma thesis on visual relationship detection, together with Prof. Petros Maragos.
- 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)

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## 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.

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## 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>.

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## Research Interests

Computer Vision, Machine Learning, Interpretable AI  
Visual Commonsense, Scene Graph Parsing, Vision-Language Inference, Low-Shot Learning

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## Programming

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

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## Languages

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

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## Personal

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