Andrei Liviu Nicolicioiu

Personal Data

Date of birth	29 December 1992
Nationality	Romanian
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Education

Oct. 2016–2018	**MSc in Artificial Intelligence, Faculty of Automatic Control and Computer Science, Politehnica University of Bucharest**. Selected courses: Computer Vision, Neural Networks, Symbolic and Statistical Learning, Natural Language Processing.
2012–2016	**BSc in Computer Science and Engineering, Faculty of Automatic Control and Computer Science, Politehnica University of Bucharest**. Selected courses: Artificial Intelligence, Machine Learning, Signal Processing, Algorithms Design, Numerical Analysis, Mathematics.

Work Experience

Oct.2016–present	**Machine Learning Researcher, Bitdefender** I am part of a research team, my focus being deep learning methods for Computer Vision. I mainly worked on multi-label classification in video and video captioning. Currently research neural graph based methods for video understanding
Oct.2016–present	**Image Processing Intern, Fotonation** Worked on a project for applying effects on video based on depth information. I worked mainly on segmentation and seamless blending of images. Designed and prototyped (in Matlab) different algorithms then implemented them in C.

Research Publications

NeurIPS 2019	**Recurrent Space Time Graph Neural Networks** Andrei Nicolicioiu, Iulia Duta, and Marius Leordeanu. *Conference on Neural Information Processing Systems (NeurIPS 2019)*
BMVC 2018	**Mining for meaning: from vision to language through multiple networks consensus** Iulia Duta, Andrei Nicolicioiu, Simion-Vlad Bogolin and Marius Leordeanu. *British Machine Vision Conference (BMVC 2018)*

Other Research Projects

2017 | **Multi-label classification in video**
With Iulia Duta and Marius Leordeanu
We studied recurrent models for multi-label prediction from frame features and the effect of global context. We investigated the usage of the labels correlation matrix before the final network prediction, in order to select the strongest cluster of labels.

2016 | **Deep Occlusion Region Detection in Video**
Bachelor Thesis - UPB. Advised by Prof. Marius Leordeanu
Developed a method for detecting occluded zones in a video using a fully convolutional model with three branches for multi-model input, with feature alignment by optical flow. The resulting segmentation maps are refined by a second, more localised convolutional network.

Teaching Experience

2016-present | Teaching Assistat at UPB. *Signal Processing* course taught by Prof. Marios Choudary.
Propose assignments and assist students with the laboratory, propose homework assignments and advise and grade the students final course projects.

2019 | Industry Invited lecturer at University of Bucharest. *Deep Learning* course taught by me and my colleagues at Bitdefender.
Presented two lectures on Deep Learning methods for Computer Vision. Proposed laboratory and homework assignments and advised students on their final course project.

2019 | Teaching Assistat at Eastern European Machine Learning Summer School (EEML).
Assisted students with the laboratory assignments.

2019 | Supervise Bachelor Thesis at UPB.
With Marius Leordeanu, co-supervised Armand Nicolicioiu on his bachelor Thesis: *Meta-Learning for Few-Shot Classification.*

Awards

2016, 2018	UPB Student Research Competition - Artificial Intelligence - First Prize(2018), Second Prize(2016)
2014, 2015	South Eastern European Mathematical Olympiad - Silver Medal (2014), Bronze Medal(2013)
2013	Intel Perceptual Computing Projects Award - 1st Place
2009, 2010, 2012	National Mathematics Olympiad of Romania - Bronze Medal
2006 - 2012	Participant in National Olympiad in Informatics (2006) Physics (2009, 2011), Mathematics (2007, 2009-2012)

Talks

Dec. 2019	*Recurrent Space Time Graph Neural Network.* Poster at Conference on Neural Information Processing Systems (NeurIPS 2019), Vancouver, Canada.
Feb. 2019	*Recent Approaches to Graph Neural Networks.* Presented at Bucharest Deep Learning Meetup, UPB, Romania.
Sep. 2018	*Mining for meaning: from vision to language through multiple networks consensus.* Poster at *British Machine Vision Conference (BMVC 2018)*, Newcastle, UK.
Nov. 2017	*Describing images and videos in natural language*, Presented at Bucharest Computer Vision Group, "Simion Stoilow" Institute of Mathematics of the Romanian Academy.
July. 2017	*Overview of multi-label classification in video.* Presented at Bucharest Deep Learning Meetup, University of Bucharest, Romania.
Feb. 2017	*Learning to segment and refine*, Presented at Bucharest Computer Vision Group, "Simion Stoilow" Institute of Mathematics of the Romanian Academy.

Other

Reviewer	ICCV 2019, AAAI 2020, CVPR 2020

Technical Skills

Programming	Python, Matlab, TensorFlow,C / C++