Nikola Janjušević

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Education

New York University, Tandon School of Engineering, Brooklyn, NY
Ph.D Candidate in Electrical and Computer Engineering, GPA: 3.99/4.0 2019-Present
Advisor: Professor Yao Wang, NYU Video Lab, NYU Wireless Lab
Telephonics Corporation Research Fellowship 2020
K-12 STEM Fellowship 2019

The Cooper Union for the Advancement of Science and Art, New York, NY
Bachelor of Engineering, Electrical Engineering, Magna Cum Laude 2015-2019
Minor in Computer Science
Half-Tuition Scholarship, Innovator's Merit Scholarship 2015-2019
Radio Club of America Scholarship Award 2019

Research Experience

Deep Convolutional Dictionary-Learning, *NYU* Fall 2019-Present
- Proposed state-of-the-art blind denoising network derived from ISTA optimization algorithm
- Leveraged interpretable construction to achieve robustness to noise-level mismatch
- arXiv preprint https://arxiv.org/abs/2103.04779

Deep Graph Convolutional Network, *NYU* Fall 2020
- Implemented *Graph Convolutional Denoising Network* in PyTorch
- Developed dynamic receptive field visualization tools for *Edge Conditioned Convolutions*
- Enabled memory aware multi-GPU training

Adaptive Denoising via Learned Thresholding, *NYU* Spring 2020
- Introduced wavelet threshold-prediction deep-network for use in iterative sparse-pursuit
- Formulated tree-structured UNet architecture for multi-resolution input/output data
- Implemented and outperformed classical statistical-modeling techniques

Graph Representation of Fonts for Deep-Learning, *The Cooper Union* Fall 2018
- Explored strategies for glyph classification with Deep-Learning
- Developed novel technique of glyph representation by embedded graph adjacency matrices
- Improved glyph classification accuracy over raster representation

Teaching Experience

Senior Instructor and Curriculum Designer Summer 2019
NYU Tandon Summer STEM Program
- Led design of two-week Machine-Learning course for High School students
- Guided students from introductory Linear-Algebra to successful projects in Deep-Learning
- Lecture material and assignments available at https://github.com/nikopj/SummerML

Lead Teaching Assistant Summer 2016, 2017
The Cooper Union Summer STEM Program
- Led six-week Digital-Logic design course of 35 High School students
- Lectured on Digital-Logic and engineering design principles
- Supervised student's work and mentored group projects

Skills

Languages	English (Native), Mandarin (Conversational), Serbian (Conversational)
Computer Languages	Python, MATLAB, Julia, C, C++, Bash
Software Tools	PyTorch, Tensorflow, LaTeX, Vim, Linux