Michele Pratusevich

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Education

Massachusetts Institute of Technology (MIT) *Sept 2014 - June 2015*
M. Eng. in Electrical Engineering and Computer Science

- Advisors: Prof. Robert Miller and Prof. Antonio Torralba
- Thesis: *EdVidParse: Detecting People and Content in Educational Videos*

Massachusetts Institute of Technology (MIT) *Sept 2009 - June 2013*
S.B. in Electrical Engineering and Computer Science. Minor in Mathematics.

Experience

Root.ai *Somerville, MA (USA)*
Senior Computer Vision Engineer, August 2018 - present

Amazon Go *Boston Metro West, MA (USA)*
Applied Research Scientist II, March 2016 - August 2018

- Collaborated with research and engineering teams to design, develop, and deploy real-time machine learning algorithmic pipelines to embedded and cloud environments. Developed and tested algorithms for image quality measurement, activity understanding, and image retrieval. Developed root-cause analysis procedures for error analysis.
- Deep Learning Approximator project for speeding up neural networks. Led project from ideation through implementation and publication. https://arxiv.org/abs/1806.05779.
- Managed and mentored 2 intern research projects.

Ditto Labs, Inc. *Cambridge, MA (USA)*
Senior Computer Vision Engineer, July 2015 - March 2016

- Created and maintained active learning object localization and detection pipeline for user-generated content.
- Designed and developed high-throughput distributed evaluation system with neural networks and RabbitMQ.

User Interface Design and Vision Groups, CSAIL, MIT *Cambridge, MA (USA)*
Graduate Research Assistant, September 2014 - June 2015

- Automatically annotated online educational videos, extracting people and educational content in near real time using a deep neural network with SVM classification and hard negative mining.

MEET (Middle East Education through Technology) *Jerusalem, Israel / Palestine*
Head of Curriculum and CS Instructor, June 2013 - September 2014

- Developed, managed, and taught 3-year computer science curriculum for high school students with the goals of learning Python, web development, and technical teamwork skills.
- Taught Israeli and Palestinian high school students computer science (Python, Django web development). Mentored student project teams using technology (website, mobile apps) to create social and political change in the region.

Skills

- Languages: English (native), Russian (proficient), Spanish (proficient)
- Development: Python, C++, Julia, git
- Embedded and Networking: C, CUDA, RabbitMQ, ØMQ, OpenGLES, Arduino
- Web: React, React Native, Django, Flask, SQL, AWS (S3, EC2, DynamoDB, SNS, SQS)
- Research tools: Caffe, MXNet, Tensorflow, Pytorch, OpenCV, Jupyter, Numpy / SciPy, Pandas, LaTeX, vim, SolidWorks, Jenkins

Activities and Interests

- Weekly introductory Python exercises: http://practicepython.org
- Educational game for learning basic terminal commands: http://mprat.org/Terminus.
- Open source: http://github.com/mprat, http://bitbucket.org/mprat