Oleh Rybkin

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Education

- **University of Pennsylvania** — Philadelphia, PA
  Ph.D. in Computer Science with Kostas Daniilidis — *2017 – Present*
- **Czech Technical University in Prague** — Prague, Czechia
  Bachelor's with Honours in Computer Science, minor in Mathematics — *2014 – 2017*
  - GPA: 3.95

Experience

- **GRASP lab, University of Pennsylvania** — Philadelphia, PA
  Doctoral Student under supervision of Kostas Daniilidis — *Aug 2017 - Present*
  - Keywords: Video Prediction, Deep Learning, Computer Vision.
  - Working on understanding motion via video prediction. See Research below.
  - Lead Teaching Assistant for Deep Learning in Computer Vision Course in Fall 2018. Managing the team of three people, creating and giving substitute lectures, creating and grading homework, holding office hours.
- **Tokyo Institute of Technology** — Tokyo, Japan
  Visiting Researcher under supervision of Akihiko Torii — *Jun – Aug 2017*
  - Keywords: Structure from Motion, Computer Vision.
  - Developed a new algorithm for robust Structure from Motion from noisy data by using redundant reconstructions.
- **Willow team, INRIA** — Paris, France
  Visiting Researcher under supervision of Josef Sivic — *Aug – Sep 2016*
  - Keywords: Algebraic Geometry, Machine Learning, Computer Vision.
  - Investigated application of Machine Learning techniques to focal length estimation.
- **Center for Machine Perception, Czech technical university in Prague** — Prague, Czechia
  Undergraduate Research Assistant under supervision of Tomas Pajdla — *Sep 2015 - Jun 2017*
  - Keywords: Algebraic Geometry, Computer Vision.
  - Investigated application of Algebraic Geometry techniques to solve middle-scale Structure from Motion problems.
  - Investigated robustness of focal length estimation given noisy data and errors in camera calibration.
  - Proposed, based on my research, a new algorithm for robust focal length computation.

Research

- **Oleh Rybkin***, Karl Pertsch*, Konstantinos G. Derpanis, Kostas Daniilidis, Andrew Jaegle, "Learning what you can do before doing anything", *International Conference on Learning Representations (ICLR) 2019.*
- Andrew Jaegle, **Oleh Rybkin**, Konstantinos G. Derpanis, Kostas Daniilidis, "Predicting the Future with Transformational States", *ArXiv 2018.* https://arxiv.org/abs/1803.09760.

Achievements

- **1st of 287 graduates by GPA and Dean's Outstanding Thesis Award,** FEE CTU in Prague. *2017*
- **Merit scholarship** for academic excellence, FEE CTU in Prague. *2014 – 2017*
- **B2 Czech language certificate,** Institute for language and preparatory studies, Charles University. *2013 – 2014*
- **Among top 0.1% of 180 000 participants** in the Ukrainian college entrance exam (EIT) in mathematics. *2013*

Relevant Coursework

- **CIS 680:** Deep Learning in Computer Vision. With Jianbo Shi. Implemented several deep models in TensorFlow.
- **CIS 899:** Opening the black box of Deep Learning. Seminar. Presented and read papers on DL theory.

Programming Skills

- **Currently using:** TensorFlow, Python, LaTeX, Git.
- **Other experience:** PyTorch, C/C++, Matlab, C#, Java, Maple.