Oleh Rybkin

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Education

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

Experience

- **GRASP lab, University of Pennsylvania** — Philadelphia, PA
  Doctoral Student advised by Kostas Daniilidis — *Aug 2017 - Present*
  - Keywords: Video Prediction, Visual Planning, Deep Learning, Computer Vision.
  - Working on understanding properties of real-world videos via video prediction.
  - Lead the Teaching Assistant team for Deep Learning in Computer Vision (CIS680, Fall 2018). Managed the team of three people, gave guest lectures, created and graded homework, and held office hours and review sessions.
- **RAIL lab, University of California, Berkeley** — Berkeley, CA
  Visiting Student Researcher advised by Sergey Levine — *Feb – Aug 2019*
  - Developing deep predictive models of videos for applications to long-term planning.
- **Okutomi-Tanaka lab, Tokyo Institute of Technology** — Tokyo, Japan
  Visiting Student Researcher advised by Akihiko Torii — *Jun – Aug 2017*
  - Keywords: Structure from Motion, Computer Vision.
  - Developed a novel algorithm for robustifying Structure from Motion by overlapping reconstructions.
- **Center for Machine Perception, Czech technical university in Prague** — Prague, Czechia
  Undergraduate Research Assistant advised by 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.
  - Proposed and compared to conventional methods an algorithm for robust focal length computation.
- **Willow team, INRIA** — Paris, France
  Visiting Student Researcher advised by Josef Sivic — *Aug – Sep 2016*
  - Investigated application of Machine Learning techniques to camera focal length estimation.

Research

- Karl Pertsch*, **Oleh Rybkin***, Jingyun Yang, Konstantinos G. Derpanis, Joseph Lim, Kostas Daniilidis, Andrew Jaegle, "KeyIn: Discovering Subgoal Structure with Keyframe-based Video Prediction", *In submission.*
- **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

- **Ranked 1st of 287 graduates by GPA; 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:** PyTorch, Python, LaTeX, Git.
- **Other experience:** TensorFlow, C/C++, Matlab, C#, Java, Maple.