Oleh Rybkin

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Education

- **University of Pennsylvania** — Philadelphia, PA
  Ph.D. in Computer Science with Kostas Daniilidis — *2017 – Present*
  - Working on motion understanding via video prediction.
- **Czech Technical University in Prague** — Prague, Czechia
  B.S. summa cum laude in Computer Science with minor in Mathematics — *2014 – 2017*
  - GPA: 3.95, class rank: 1st.

Work Experience

- **GRASP lab, University of Pennsylvania** — Philadelphia, PA
  Doctoral Student under supervision of Kostas Daniilidis — *Aug 2017 - Present*
  - Research area: Deep Learning, Computer Vision. Use Python with Tensorflow.
  - Was part of the project to develop a model for video prediction that learns to generate the future via high-level transformations of the past.
  - Leading a project on harnessing implicit uncertainty in video prediction to develop a cognitive understanding of present intelligent agents.
- **Tokyo Institute of Technology** — Tokyo, Japan
  Research Intern under supervision of Akihiko Torii — *Jun 2017 – Aug.2017*
  - Reseach area: Structure from Motion, Computer Vision. Used MatLab.
  - Developed a new algorithm for robust Structure from Motion from noisy data by using redundant reconstructions.
- **Willow team, INRIA** — Paris, France
  Research Intern under supervision of Josef Sivic — *Aug 2016 – Sep 2016*
  - Reseach area: Machine Learning. Used MatLab with the MatConvNet library.
  - Researched 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*
  - Reseach area: Algebraic Geometry in Computer Vision. Used MatLab and Python.
  - Researched application of Algebraic Geometry techniques to solve middle-scale Structure from Motion problems. Used Maple and Python with the Sage framework.
  - Researched robustness of algorithms for focal length estimation given noisy data and errors in camera calibration. Used MatLab.
  - Proposed, based on my previous research, a new algorithm for robust focal length computation. Used MatLab.

Work in review

- Andrew Jaegle, **Oleh Rybkin**, Konstantinos G. Derpanis, Kostas Daniilidis, "Predicting the Future with Transformational States", submitted to *15th European Conference on Computer Vision (ECCV)*. Available on ArXiv: 1803.09760.

Awards and Certificates

- **Czech technical university in Prague** — Prague, Czechia
  Deans Outstanding Thesis Award — *Aug 2017*
- **Institute for language and preparatory studies, Charles University** — Podebrady, Czechia
  B2 Czech language certificate after a one-year course. — *2013 – 2014*

Languages

- Native bilingual: Russian, Ukrainian.
- Fluent: English, Czech.

Programming Skills

- Proficient: TensorFlow, Python, LaTeX, Git, Matlab.
- Some familiarity: C/C++, C#, Java, Maple.