Kate Rakelly

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Education

University of California, Berkeley (Fall 2015 - Present)
PhD student in Computer Vision and Robotics -- GPA: 3.77 / 4.0
NSF GRFP Honorable Mention, 2017
EECS Excellence Award, 2015
University of California, Berkeley (Fall 2011 - Spring 2015)
B.S. Electrical Engineering and Computer Science -- GPA: 3.87 / 4.0
Graduated with High Honors (top 10% of EECS students by GPA)
Citizenship: United States

Scientific Publications

Kate Rakelly*, Evan Shelhamer*, Trevor Darrell, Alexei A. Efros, Sergey Levine, **Few-Shot Segmentation Propagation with Guided Networks**, *Preprint*, 2018

Kate Rakelly, Evan Shelhamer, Trevor Darrell, Alexei A. Efros, Sergey Levine, **Conditional Networks for Few-Shot Semantic Segmentation**, *Intl.Conference on Learning Representations (ICLR) Workshop*, 2018

Evan Shelhamer*, Kate Rakelly*, Judy Hoffman*, Trevor Darrell, **Clockwork Convnets for Video Semantic Segmentation**, *Second Intl. Workshop on Video Segmentation* (ECCV), 2016

Shiry Ginosar, Kate Rakelly, Sarah Sachs, Brian Yin, Alexei A. Efros, **A Century of Portraits: A Visual Historical Record of American High School Yearbooks***, Extreme Imaging Workshop, Intl. Conference on Computer Vision (ICCV)*, 2015

Employment Experience

Research Intern, Adobe Creative Technologies Lab, Adobe, San Francisco, Spring 2014
- Built a web application with an interactive visualization of deep visual features extracted from a large database of design images for users to discover similar visual styles.
- Explored how image tags correlate with visual similarity, and combined tags with visual features to discover clusters within visual styles.

Applications Engineering Intern, Texas Instruments, Santa Clara, CA, Summer 2012
- Built a PSPICE model for a hysteretic boost DC-DC switching voltage regulator. Model was integrated into the online Webench application for client use.

Engineering Design Intern, Tri-En Corporation, San Clemente, CA, Summer 2011
- Incorporated change notices into electrical design calculations. Revised a breaker coordination calculation and a battery sizing analysis calculation.

Academic Research Experience

University of California Berkeley - Profs. Sergey Levine, Alexei A. Efros, UC Berkeley, Present
PhD Student Researcher
- Develop visual recognition algorithms that can learn from few or many examples, adapt to novel scenarios, and can be useful for robotic manipulation.

University of California Berkeley - Prof. Trevor Darrell, UC Berkeley, Fall 2015 - Spring 2016
PhD Student Researcher
- Dynamic fully convolutional network architecture for efficient video semantic segmentation.
- Semi-supervised techniques for adapting semantic segmentation algorithms across visual domains.

University of California Berkeley - Prof. Alexei A. Efros, UC Berkeley, Spring 2014 - Spring 2015
Undergraduate Student Researcher
- Combine data-driven machine learning techniques with deep visual features to discover trends in fashion

and hairstyles, using a novel dataset of a century of American high school yearbook portraits.
- Funded by the QUEST and SRC undergraduate research awards.

University of California Berkeley - Prof. Claire Tomlin, UC Berkeley, Summer 2013
Undergraduate Student Researcher
- Develop and prototype a robust algorithm for utility companies to optimally control energy storage systems in a distribution network to minimize expensive real time energy purchases.
- Funded by QUEST undergraduate research award.

Teaching Experience

UC Berkeley Student Instructor (TA)
- CS70 - Discrete Mathematics for CS with instructor James Cook, Summer 2014
- EE100 - Introduction to Microelectronic Circuits with Prof. Constance Chang-Hasnain, Summer 2013

Student Activities

Co-organizer for BAIR Undergraduate Mentoring Program, Spring 2018 - present
- Facilitate a mentoring program connecting undergraduates interested in AI research with graduate student mentors.

Women in Computer Science (WiCSE) Mentor, Fall 2017 - present
- Mentor for female incoming PhD students in EECS

Invited speaker at the Jacobs' Design Institute Groundbreaking Ceremony, Spring 2014
- One of three engineering students selected to speak about innovation in engineering

Electrical Engineer at Pioneers in Engineering (PiE), Spring 2012 - Spring 2013
- Designed, prototyped, and organized the production of a buck switching regulator to power servo motors for the 2013 season robot electrical kit.

Organizer for CS KickStart Program, Fall 2011 - Fall 2014
- Added a new electrical engineering lab to the program: designed a circuit that uses a two transistor oscillator to generate a siren tone, and organized and taught the lab.