SERGEY KARAYEV

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RESEARCH INTERESTS

I want to solve hard problems in machine learning and computer vision.

EDUCATION

University of California, Berkeley · *August 2009 - Present*
Ph.D. Computer Science
Advisor: Trevor Darrel.
Major coursework: Statistical Learning, Computer Vision, Convex Optimization, Natural Language Processing, Computational Neuroscience, Sequential Decisions.
Minor coursework: Advanced Algorithms, Computer Systems, Marketing New Technologies.

University of Washington, Seattle · *September 2005 - June 2009*
B.S. Computer Science / B.A. Psychology.
Thesis Advisor: Steven Seitz

RESEARCH EXPERIENCE

Graduate Researcher
UC Berkeley *September 2009 - Present*
Worked with Prof. Trevor Darrell, Prof. Pieter Abbeel. Developed generative hierarchical models for local features for object detection and recognition; Constructed novel 3-D category-level dataset and implemented method for object detection; Constructed novel dataset and implemented apprenticeship learning for human visual attention; Implemented new approach to test-time efficiency for multi-class object recognition.

Undergraduate Researcher
University of Washington *October 2007 - June 2009*
Worked with Prof. Steve Seitz, Prof. Luis Ceze. Augmented reality on a mobile device; novel human-computer interaction through a webcam; identification of mutex critical sections.

Research Apprentice
Friday Harbor Laboratories (UW) *April 2006 - June 2006*
Worked with Prof. Shaun Cain, Prof. James Murray. Investigated the distribution of neuropeptides in the central nervous system of a sea slug.

PUBLICATIONS

Dynamic Feature Selection for Classification on a Budget.
Sergey Karayev, Mario Fritz, Trevor Darrell.
ICMLW 2013.

Timely Object Recognition.
Sergey Karayev, Tobias Bamgartner, Mario Fritz, Trevor Darrell.
NIPS 2012.

A Category-Level 3-D Object Dataset: Putting the Kinect to Work.
Allison Janoch, Sergey Karayev, Yangqing Jia, Jonathan T. Barron, Mario Fritz, Kate Saenko, Trevor Darrell.
ICCVW 2011.

Practical 3-D Object Detection Using Category and Instance-level Appearance Models.
Kate Saenko, Sergey Karayev, Yangqing Jia, Alex Shyr, Allison Janoch, Jon Long, Mario Fritz, Trevor Darrell.
IROS 2011.

A Probabilistic Model for Recursive Factorized Image Features.
Sergey Karayev, Mario Fritz, Sanja Fidler, Trevor Darrell.
CVPR 2011.

An Additive Latent Feature Model for Transparent Object Recognition.
Mario Fritz, Michael Black, Gary Bradski, Sergey Karayev, Trevor Darrell.
NIPS 2009.

Work Experience

Creative Technologies Lab Internship
Adobe, San Francisco, CA *June 2013 - September 2013*
Predicting various aesthetic judgements of photographs.

Research and Development Internship
Artsy, New York City, NY *June 2012 - September 2012*
Worked on predicting "genes" of artworks, improving visual similarity matches; developed tools to annotate and clean data.

Software Development Internship
Zillow.com, Seattle, WA *June 2008 - September 2008*
Maintained, improved, and added features to a high-traffic website. Shipped multiple projects.

Teaching Experience

Graduate Student Instructor
UC Berkeley, Berkeley, CA *August 2012 - December 2012*
CS 188: Artificial Intelligence taught by Dan Klein and Pieter Abbeel, offered to three hundred Berkeley undergraduates as well as online to thousands.

Teaching Assistant: Intro to Programming
CS Department, University of Washington *January 2007 - June 2007*
Taught a section of twenty students in the introductory Java-based programming course (CSE 142): lectured on concepts, graded assignments, tutored in the programming lab.

Languages

Programming: Python/Numpy, Matlab, C/C++ for research. Python and Ruby for web development. Java in the past.
Human: Fluent Russian. Four years of French.

Activities

Officer of the CSGSA: Industrial liaison officer of the Berkeley Computer Science Graduate Association. *June 2012 - Present*.
After-school program volunteer: teaching 4th and 5th grade kids about energy and the environment at a low-income school. *September 2010 - Present*.
Graduate Assembly Delegate: representing the CS department in the Berkeley graduate student governing body. *June 2010 - Present*.

Honors and Awards

National Defense Science and Engineering Graduate Fellowship (full tuition and stipend), 2009-2012
Mary Gates Research Scholarship (undergraduate research stipend), 2008
Microsoft Scholarship (CS department award), 2008
Honors Bordeaux Scholarship (full tuition for one year), 2008
Phi Beta Kappa, 2007-present
Mary Gates Honors Scholarship (full tuition for three years), 2005-2007
Robert C. Byrd Honors Scholarship (Washington State award), 2005-2009
National Merit Scholarship (sponsored by the Boeing Company), 2005-2009
Undergraduate Academic Excellence Scholarship (UW award), 2005.