

Education

Georgia Institute of Technology, Atlanta, GA

Pursuing Doctorate of Philosophy in Computer Science

August 2013 - Present

Bachelor of Science in Computer Science (GPA 3.35 - High Honors)

August 2009 - May 2013

Research

Video Segmentation Project

January 2013 - Present

Developed an online system to make our video segmentation algorithm more accessible to other researchers by building a platform on Google Cloud Services (uses App Engine, Datastore and Compute Engine) to enable researchers to upload and segment their videos online.

Available at www.videosegmentation.com. This work was presented at a CVPR 2014 Panel.

Video Annotation Project

August 2014 - Present

This project is an ongoing effort to develop pixel-level annotations for a large dataset of videos. We have approached this problem from numerous angles, one of which was building a test set from public Flickr videos for users to annotate (available at www.videoannotation.com). We are currently building a larger video dataset for the research community that we hope will enhance future endeavors in object detection.

Egocentric Daily Activities Project

January 2015 - Present

This endeavour focuses on the use of egocentric images for activity recognition. Our first approach involved the collection of just over 40,000 egocentric images, each with an activity label. These images were then analyzed through machine learning approaches, specifically a convolutional neural network combined with a random decision forest. See publication below for more details.

Egocentric Vacation Project

August 2014 - Present

The egocentric vacation project focused on detecting picturesque moments in long video streams by leveraging context for the data. We processed over 20 hours of video recorded over a period of two weeks across the United States by a single participant and generated video highlights for the participants vacation. One of the key contributions of this project was the introduction of a clever technique to detect well aligned egocentric images without the use of traditional horizon detection techniques. See publication below for more details.

Industry Work

Google, Inc - Software Engineering Internships

Google Research - Atlanta, GA (part-time)

August 2015 - Present

Mountain View, CA (full-time)

May 2015 - August 2015

Working with Dr. Grundmann and Dr. Raveendran under Google Research. The details of this work are to be released.

Google Research - Atlanta, GA (part-time)

August 2014 - December 2014

Mountain View, CA (full-time)

May 2014 - August 2014

Worked with Dr. Matthias Grundmann and Dr. Vivek Kwatra on determining video saliency and developing the framework for video segmentation.

Google Images - Mountain View, CA (full-time)

May 2012 - August 2012

Worked on the Google Images team with David Chen - we assessed how to visualize stereoscopic imagery on the web.

Google Platforms - Mountain View, CA (full-time)

May 2011 - August 2011

Teaching Experience

- Georgia Tech Online Masters Graduate Teaching Assistant** January 2014 - Present
Redesigned the majority of the assignments for the online offering of Computational Photography with Dr. Irfan Essa.
- Georgia Tech College of Computing Teaching Assistant** January 2013 - May 2013
On campus teaching assistant for CS 6476 - Computational Journalism with Dr. Irfan Essa.
- Georgia Tech College of Computing Study Abroad Teaching Assistant - Barcelona, Spain** May 2013 - August 2013
Teaching Assistant for Computational Photography and Computational Journalism in addition to helping manage and coordinate the Georgia Tech Study Abroad program in Barcelona Spain (~55 students traveling abroad).

Publications

- Discovering Picturesque Highlights from Egocentric Vacation Videos - Winter Applications of Computer Vision** March 2016
Vinay Bettadapura, Daniel Castro, Irfan Essa - <http://goo.gl/RvgW6v>
- Predicting Daily Activities from Egocentric Images using Deep Learning - International Symposium on Wearable Computing** September 2015
Daniel Castro, Steven Hickson, Vinay Bettadapura, Edison Thomaz, Gregory Abowd, Henrik Christensen, Irfan Essa - <http://goo.gl/y6ZYDP>
- Calibration Free Rolling Shutter Removal - International Conference on Computational Photography - Best Paper** April 2012
Matthias Grundmann, Vivek Kwatra, Daniel Castro, Irfan Essa - <http://research.google.com/pubs/pub37744.html>

Awards

- Tower Awards Recipient** 2013
Awarded for Undergraduate Academic Excellence for underrepresented students. 2012
- Outstanding Undergraduate Research Award - College of Computing, Georgia Tech** 2011
- Best Paper Award - International Conference on Computational Photography** 2012

Activities / Skills

- Panamanian Students @ Georgia Tech (PANAS) - Technology Chair** August 2015 - Present
Helped with any technology-related issues for the organization.
- Member of the Georgia Tech Skydiving Club** September 2009 - May 2010
13 jumps, finished AFF certification (*no longer certified due to inactivity).
- Extensive Travelling Experience - 28 Countries**
More than comfortable in an **international community** and with traveling locally / abroad as part of the job.
Speak **Spanish and English** natively and have some experience in **French**.
- Computational Skills**
- Programming Languages** - Python, C++, Javascript, Java.
 - Web Development Frameworks** - Django, webapp2, Google Cloud Services (Compute Engine, App Engine, Cloud Datastore, Cloud Storage).
 - Deep Learning Frameworks** - I work mainly with caffe, but have dabbled with tensorflow, torch, and theano.