



DANIEL CASTRO

COMPUTER VISION RESEARCHER

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EDUCATION:

- **Georgia Institute of Technology**, Atlanta, GA August 2009 - Present
 - Bachelor of Computer Science (GPA: 3.35 – High Honors)
 - Pursuing Doctor of Philosophy in Computer Science - advised by Dr. Irfan Essa (currently enrolled – August 2013)

RESEARCH

- **Video Segmentation and Annotation Project** January 2013 – Present
 - <http://www.videosegmentation.com> – Developed an online system to make our research more accessible and available by building a platform on Google's Cloud Services that uses App Engine and Compute Engine to process user uploaded videos.
 - Working on improving the video segmentation algorithm – main approach is to improve dense optical flow.
- **Video Summarization Project** October 2013 – December 2013
 - Leading a project on understanding better ways to visualize and understand video in an efficient and quick manner. This tackles the problem of having too much information (i.e. videos) and not being able to understand the information in a quick manner.
- **Gait Tracking for Pre-Diagnosis of Alzheimer's Disease Project** November 2012 – May 2014
 - Worked with Dr. Irfan Essa and Dr. David Gutman (Emory University) in using the Microsoft Kinect to track the gait of patients over time in order to assess the development of Alzheimer's Disease based on previous work that shows a correlation between a slowing gait and the diseases' development.

WORK EXPERIENCE

- **Google Software Engineering Intern** – Intern in Mountain View, California. May 2014 – December 2014
 - Worked under Dr. Grundmann in Google Research.
- **Greenverse Non-Profit Organization** – Webmaster in Atlanta, Georgia. 2010 – Present
 - <http://www.greenverse.org> – Designed, built, and currently managing this site.
- **Google Software Engineering Intern** – Intern in Mountain View, California. May 2012 – August 2012
 - Implemented various methods of visualizing stereoscopic imagery on the web.
- **Georgia Tech College of Computing** – Mentor in Atlanta, Georgia. February 2010 – December 2011
 - Assist Freshman CS Majors in getting involved and adapting to Georgia Tech.
- **Google BOLD Practicum Associate** – Intern in Mountain View, California. June 2011 – August 2011
 - Worked with the Platforms team to develop a dashboard, using both Java and Google Web Toolkit, with two other interns. Gained skills in pair programming, teamwork, and the use of back and front end systems.
- **Georgia Tech Housing** - Peer Leader (also known as RA) – Atlanta, Georgia. August 2010 – May 2011
 - Help Freshman Students adapt to the Georgia Tech Community

TEACHING EXPERIENCE

- **Georgia Tech Online Masters Program Teaching Assistant** – Online Course January 2014 – Present
 - TA for OMSCS 6475 - Computational Photography, taught by Dr. Essa
- **Georgia Tech College of Computing Teaching Assistant** - Atlanta, GA January 2013 – May 2013
 - TA for Computational Journalism on campus. ~50 students.
- **Georgia Tech Teaching Assistant for Study Abroad** – Barcelona, Spain May 2013 – August 2013
 - Helped manage Computational Photography and Computational Journalism under Dr. Irfan Essa

ACTIVITIES / SKILLS

- **Hispanics at the College of Computing (H@CC)** - Co-Founder and President August 2010 – May 2011
- **Member of the Georgia Tech Skydiving Club.** September 2009 – May 2010
- **Well-travelled**, more than comfortable in an **international community**, and/or working abroad.
 - Studied Abroad in Barcelona, Spain, travelled to 23+ countries. May - July 2010
 - Can speak English and Spanish fluently, and have experience in French.
- **Programming Languages**
 - Proficiency in Python, Java, C++ and Javascript. Proficient experience in Django and webapp2, the MVC Framework and Google's Cloud Services (Google Compute Engine, Cloud Storage, App Engine, Cloud SQL).
 - Ability to quickly learn and use other languages.

PUBLICATIONS

- "Calibration-Free Rolling Shutter Removal", Matthias Grundmann, Vivek Kwatra, Daniel Castro, Irfan Essa, International Conference on Computational Photography, 2012
 - Best Paper Award at ICCP 2012.
 - See: <http://research.google.com/pubs/pub37744.html>

AWARDS

- **Outstanding Undergraduate Research Award** - College of Computing, Georgia Tech April 2012
- **Runner-up - People's Choice Award** – UROC 2012 Symposium April 2012
- **Tower Awards Recipient** – Recognition of academic achievement for underrepresented students. April 2011/12
- **Best Paper Award** – Recognition of the best paper at the ICCP conference (see above publication). April 2012