Jason R. **Parham**

Ph.D. Student · Computer Vision

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Education

Rensselaer Polytechnic Institute — *Troy, NY*

Doctor of Philosophy · Computer Science · Computer Vision — *Aug 2012 - PRESENT*

- Advised by Dr. Charles V. Stewart, Computer Science Department Chair
- Anticipated Graduation: May 2018
- Cumulative GPA: 4.0

Rensselaer Polytechnic Institute — *Troy, NY*

Master of Science · Computer Science · Computer Vision — *Aug 2012 - Dec 2015*

- Master's Thesis: "Photographic Censusing of Zebra and Giraffe in the Nairobi National Park"

Pepperdine University — *Malibu, CA*

Bachelor of Science · Computer Science / Mathematics — *Aug 2008 - May 2012*

Experience

Kitware — *Clifton Park, NY*

Computer Vision Research Intern — *May 2015 - PRESENT*

- Designed and developed deep learning Python library (KWCNN) using Lasagne / Theano with automated network definition and model training
- Designed and developed aerial change detection system using supervised fully-convolutional neural networks and unsupervised auto-encoders

Rensselaer Polytechnic Institute — *Troy, NY*

Graduate Research Assistant — *Aug 2014 - PRESENT*

- Designed and developed IBEIS (Image Based Ecological Information System) Image Analysis system as member of inter-disciplinary collaborative research team between Rensselaer Polytechnic Institute, Princeton University, University of Illinois Chicago, and WildMe
- Computer vision research emphasis is in object localization, classification, detection, and segmentation in the real world

Rensselaer Polytechnic Institute — *Troy, NY*

Graduate Teaching Assistant — *Aug 2012 - PRESENT*

- Head / administrative TA for introductory Computer Science I (Python) and graduate-level Computer Vision courses; experience as a lab and office hour instructor, managing web-based grading system (Submitty) and automated grade distribution
- Experience managing a team of 11 TAs, 21 sections, and over 650 concurrent students across 6 semesters and multiple professors

Self-Employed — *Cohoes, NY*

Full Stack Web Developer — *Aug 2012 - PRESENT*

- Designed and developed customized, web-based applications, including experience with WordPress CMS

Publications

Animal Population Censusing at Scale with Citizen Science and Photographic Identification — *Stanford, CA*

AI for Social Good (AISOC) Spring 2017 Symposium — *Mar 2017*

- Accepted Submission

The Great Grevy's Rally: The Need, Methods, Findings, Implications and Next Steps — *Princeton, NJ*

Self-published · Princeton University — *Sep 2016*

Detecting Plains and Grevy's Zebras in the Real World — *Lake Placid, NY*

IEEE Winter Conference on Applications of Computer Vision (WACV) 2016 — *Mar 2016*

Photographic Censusing of Zebra and Giraffe in the Nairobi National Park — *Troy, NY*

Master's Thesis · Rensselaer Polytechnic Institute — *Dec 2015*

Technical Report: Evaluation of Transfer Learning for Viewpoint Classification — *Troy, NY*

Self-published · Rensselaer Polytechnic Institute — *Dec 2014*

Large Scale Percent-Sorted Decision Randomized Algorithm — *Troy, NY*

Self-published · Rensselaer Polytechnic Institute — *May 2013*

Presentations

Tech Lunch with Computer Vision Research Intern Jason Parham on Unsupervised Deep Learning with KWCNN — *Clifton Park, NY*

Presenter · Kitware Summer 2016 Tech Talk Lunch Series — *Aug 2016*

Detecting Plains and Grevy's Zebras in the Real World — *Troy, NY*

Poster · Computer Science Accepted Students Day Poster Session — *Apr 2016*

Detecting Plains and Grevy's Zebras in the Real World — *Lake Placid, NY*

Presenter · 2ND Workshop on Automated Analysis of Video Data for Wildlife Surveillance — *Mar 2016*

Tech Lunch with Computer Vision Research Intern Jason Parham introducing the KitWare Convolutional Neural Network (KWCNN) Python Module with Live Demos — *Clifton Park, NY*

Presenter · Kitware Summer 2015 Tech Talk Lunch Series — *Aug 2015*

Photographic Censusing of Zebra and Giraffe in the Nairobi National Park — *Troy, NY*

Presenter · Master's Thesis Defense — *Aug 2015*

Citizen Science Data Collection with Processing Bottlenecks — *Troy, NY*

Poster · Computer Science Accepted Students Day Poster Session — *Apr 2015*

Projects

IBEIS Computer Vision System / Wildbook Image Analysis Plug-in — *Python / C / C++ / SQLite / Lasagne / Theano / CUDA*

github.com/WildbookOrg/ibeis — *Aug 2013 - PRESENT*

- A stand-alone image and algorithm manager for computer vision image processing; integrates with Wildbook wildlife system via REST API
- Prototypes used at three conservancies in Kenya and during the GZGC (Great Zebra and Giraffe Count) and GGR (Great Grevy's Rally) censusing rallies

Intercheck — *Python*

github.com/bluemellophone/Intercheck — *Feb 2015 - PRESENT*

- An automated SpeedTest logger and graphing web interface for monitoring Internet connectivity; designed for use on Raspberry Pi 3

Submitty · Rensselaer Center for Open Source Software (RCOS) — *PHP / HTML / CSS / MySQL / JavaScript / jQuery / AJAX*

github.com/Submitty/Submitty — *Sep 2012 - PRESENT*

- A web-based homework submission system with automated code execution, auto-grading, and rubric-based TA grading interface

Cryptographically Secure E-Voting Protocol — *Python*

github.com/bluemellophone/JDKK-Protocol — *Mar 2013 - May 2013*

- A scalable, secure e-voting protocol that is hardened against a malicious election judge and colluding voters

Cryptographically Secure ATM Communication Protocol — *C++*

github.com/bluemellophone/JTM-Protocol — *Sep 2012 - Nov 2012*

- A secure communication protocol for use between a bank and ATM that uses asymmetric and symmetric encryption

Committees

IEEE Winter Conference on Applications of Computer Vision (WACV) 2017 — *Santa Rosa, CA*

WACV 2017 Conference Paper Reviewer — *Mar 2017*

Accepted Graduate Students Peer Reception Committee — *Troy, NY*

Mentor — *Aug 2016*

Extracurricular

Clifton Park Church of Christ — *Clifton Park, NY*

Church Member / Web Administrator — *Feb 2013 - PRESENT*

- Minister: Charlie Ruff

IEEE — *Troy, NY*

Student Member — *Mar 2016 - PRESENT*

Sigma Phi Epsilon · Cal Psi · Pepperdine University — *Malibu, CA*

Member / Alumni — *Nov 2008 - May 2012*