

Jason R. Parham

PH.D. STUDENT · COMPUTER VISION

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Education

Rensselaer Polytechnic Institute

DOCTOR OF PHILOSOPHY · COMPUTER SCIENCE · COMPUTER VISION

Troy, NY

Aug 2012 - PRESENT

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

Rensselaer Polytechnic Institute

MASTER OF SCIENCE · COMPUTER SCIENCE · COMPUTER VISION

Troy, NY

Aug 2012 - Dec 2015

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

Pepperdine University

BACHELOR OF SCIENCE · COMPUTER SCIENCE / MATHEMATICS

Malibu, CA

Aug 2008 - May 2012

Experience

Kitware

COMPUTER VISION RESEARCH INTERN

Clifton Park, NY

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

GRADUATE RESEARCH ASSISTANT

Troy, NY

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

GRADUATE TEACHING ASSISTANT

Troy, NY

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 (Submittity) 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

FULL STACK WEB DEVELOPER

Cohoes, NY

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

AAAI SPRING SYMPOSIUM SERIES 2017 (SSS-17) · GREY'S ZEBRA TRUST

Mar 2017

- Accepted Submission

The Great Grevy's Rally: The Need, Methods, Findings, Implications and Next Steps

Nairobi, Kenya

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

The Great Zebra and Giraffe Count: The Power and Rewards of Citizen Science

Nairobi, Kenya

SELF-PUBLISHED · KENYA WILDLIFE SERVICE

Jul 2015

Technical Report: Evaluation of Transfer Learning for Viewpoint Classification

Troy, NY

SELF-PUBLISHED · RENSSELAER POLYTECHNIC INSTITUTE

Dec 2014

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

Association for the Advancement of Artificial Intelligence (AAAI)

Troy, NY

STUDENT MEMBER

Jan 2017 - PRESENT

The Computer Vision Foundation (CVF)

Troy, NY

MEMBER

Jan 2017 - PRESENT

Institute of Electrical and Electronics Engineers (IEEE)

Troy, NY

STUDENT MEMBER

Mar 2016 - PRESENT