

Jason R. Parham

PH.D. STUDENT · COMPUTER VISION

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Education

Rensselaer Polytechnic Institute

DOCTOR OF PHILOSOPHY · COMPUTER SCIENCE · COMPUTER VISION

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

Troy, NY

Aug 2012 - PRESENT

Rensselaer Polytechnic Institute

MASTER OF SCIENCE · COMPUTER SCIENCE · COMPUTER VISION

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

Troy, NY

Aug 2012 - Dec 2015

Pepperdine University

BACHELOR OF SCIENCE · COMPUTER SCIENCE / MATHEMATICS

Malibu, CA

Aug 2008 - May 2012

Experience

Kitware

COMPUTER VISION RESEARCH INTERN

- 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

Clifton Park, NY

May 2015 - PRESENT

Rensselaer Polytechnic Institute

GRADUATE RESEARCH ASSISTANT

- 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

Troy, NY

Aug 2014 - PRESENT

Rensselaer Polytechnic Institute

GRADUATE TEACHING ASSISTANT

- 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 (Submittly) and automated grade distribution
- Experience managing a team of 11 TAs, 21 sections, and over 650 concurrent students across 6 semesters and multiple professors

Troy, NY

Aug 2012 - PRESENT

Publications

Efficient Generation of Image Chips for Training Deep Learning Networks

PROCEEDINGS OF SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS (SPIE) · AUTOMATIC TARGET RECOGNITION (ATR)

XXVII

Anaheim, CA

Apr 2017

Animal Population Censusing at Scale with Citizen Science and Photographic Identification

AAAI SPRING SYMPOSIUM SERIES 2017 (SSS-17) · AI FOR THE SOCIAL GOOD

Stanford, CA

Mar 2017

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

SELF-PUBLISHED · PRINCETON UNIVERSITY

Nairobi, Kenya

Sep 2016

Detecting Plains and Grevy's Zebras in the Real World

IEEE WINTER CONFERENCE ON APPLICATIONS OF COMPUTER VISION WORKSHOPS (WACVW-2016)

Lake Placid, NY

Mar 2016

Photographic Censusing of Zebra and Giraffe in the Nairobi National Park

MASTER'S THESIS · RENSSELAER POLYTECHNIC INSTITUTE

Troy, NY

Dec 2015

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

SELF-PUBLISHED · KENYA WILDLIFE SERVICE

Nairobi, Kenya

Jul 2015

Technical Report: Evaluation of Transfer Learning for Viewpoint Classification

SELF-PUBLISHED · RENSSELAER POLYTECHNIC INSTITUTE

Troy, NY

Dec 2014

Presentations

Animal Population Censusing at Scale with Citizen Science and Photographic Identification

PRESENTER & POSTER · AI FOR THE SOCIAL GOOD

[Stanford, CA](#)

Mar 2017

Tech Lunch with Computer Vision Research Intern Jason Parham on Unsupervised Deep Learning with KWCNN

PRESENTER · KITWARE SUMMER 2016 TECH TALK LUNCH SERIES

[Clifton Park, NY](#)

Aug 2016

Detecting Plains and Grevy's Zebras in the Real World

POSTER · COMPUTER SCIENCE ACCEPTED STUDENTS DAY POSTER SESSION

[Troy, NY](#)

Apr 2016

Detecting Plains and Grevy's Zebras in the Real World

PRESENTER · 2ND WORKSHOP ON AUTOMATED ANALYSIS OF VIDEO DATA FOR WILDLIFE SURVEILLANCE

[Lake Placid, NY](#)

Mar 2016

Tech Lunch with Computer Vision Research Intern Jason Parham introducing the KitWare Convolutional Neural Network (KWCNN) Python Module with Live Demos

PRESENTER · KITWARE SUMMER 2015 TECH TALK LUNCH SERIES

[Clifton Park, NY](#)

Aug 2015

Photographic Censusing of Zebra and Giraffe in the Nairobi National Park

PRESENTER · MASTER'S THESIS DEFENSE

[Troy, NY](#)

Aug 2015

Citizen Science Data Collection with Processing Bottlenecks

POSTER · COMPUTER SCIENCE ACCEPTED STUDENTS DAY POSTER SESSION

[Troy, NY](#)

Apr 2015

Projects

IBEIS Computer Vision System / Wildbook Image Analysis Plug-in

[GITHUB.COM/WILDBOOKORG/IBEIS](#)

[Python / C / C++ / SQLite](#)

[Lasagne / Theano / CUDA](#)

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

[GITHUB.COM/BLUEMELLOPHONE/INTERCHECK](#)

[Python](#)

Feb 2015 - PRESENT

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

Submittity · Rensselaer Center for Open Source Software (RCOS)

[GITHUB.COM/SUBMITTY/SUBMITTY](#)

[PHP / HTML / CSS / MySQL](#)

[JavaScript / jQuery / AJAX](#)

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

[GITHUB.COM/BLUEMELLOPHONE/JDKK-PROTOCOL](#)

[Python](#)

Mar 2013 - May 2013

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

Committees

IEEE Winter Conference on Applications of Computer Vision (WACV) 2017

WACV 2017 CONFERENCE PAPER REVIEWER

[Santa Rosa, CA](#)

Mar 2017

Accepted Graduate Students Peer Reception Committee

MENTOR

[Troy, NY](#)

Aug 2016

Extracurricular

Association for the Advancement of Artificial Intelligence (AAAI)

STUDENT MEMBER

[Troy, NY](#)

Jan 2017 - PRESENT

The Computer Vision Foundation (CVF)

MEMBER

[Troy, NY](#)

Jan 2017 - PRESENT

Institute of Electrical and Electronics Engineers (IEEE)

STUDENT MEMBER

[Troy, NY](#)

Mar 2016 - PRESENT