# KEATON KRAIGER

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## EDUCATION

**BS in Computer Science** Expected June 2020
*Portland State University,* Portland, OR
- GPA: 3.79

## RESEARCH INTERESTS

I am broadly interested in artificial intelligence and its applications in computer vision and reinforcement learning. My work has involved biologically-inspired models to perform object detection/recognition while capturing and maintaining object structure and spatial relations. Prospective future research areas include muli-modeal learning, novel view synthesis, scene understanding, multi-task learning, and capturing visual relationships in images and video.

## RESEARCH EXPERIENCE

**Research Assistant**, Biologically-Inspired Computing Lab (BICL) Dec. 2018 - Current
*Dr. Dan Hammerstrom, Portland State University*
- Develop biologically-inspired algorithms to perform object detection
- Explore grid cell functionality in capturing object structure while maintaining position and scale invariance
- Process image datasets with grid cell model to aid in object detection and image classification
- Compare different image classifier performances, specifically convolutional neural networks and capsule networks when integrated with the grid cell model

**Undergraduate Mentee**, Undergraduate Research & Mentoring Program Nov. 2018 - May 2019
*Fariborz Maseeh College of Engineering and Computer Science, Portland State University*
- Paired with faculty mentor to conduct funded research during the winter and spring term
- Attended program workshops on developing abstracts, research proposals, research questions, research methods, and means of communicating research findings
- Gained a foundation of computer science research by reviewing scholarly articles and relevant work being conducted

## POSTER PRESENTATIONS

K. Kraiger & D. Hammerstrom. "The Applications of Grid Cells in Computer Vision," presented at Portland State University Student Research Symposium, Portland, Oregon, 2019

K. Kraiger & D. Hammerstrom. "The Applications of Grid Cells in Computer Vision," presented at Portland State University Undergraduate Research and Mentoring Program Research Presentation, Portland, Oregon, 2019

## WORK EXPERIENCE

**Technical Course Student Specialist (TCSS)** Jun. 2019 - Current
*Karla Fant, Portland State University*

- Work with undergraduate computer science students during weekly homework recitation sessions on programming assignments and algorithm development
- Help facilitate Introduction to Computer Science weekly labs
- Assist instructor during end of the term proficiency demonstrations

**Web development** Oct. 2018
*Dr. Kurt Kraiger, Dr. Lisa Finkelstein, Dr. Lebena Varghese, Colorado State University*

- Developed interactive online supplemental material for academic publication
- Kraiger, Kurt, Lisa M. Finkelstein, and Lebena S. Varghese. "Enacting Effective Mentoring Behaviors: Development and Initial Investigation of the Cuboid of Mentoring." *Journal of Business and Psychology* 34, no. 4 (2019): 403-424

**Course Grader** Sep. 2017 - Current
*Karla Fant, Portland State University*

- Provide timely feedback and grades on students' programming and algorithm assignments

## PROFESSIONAL AFFILIATIONS

Institute of Electrical and Electronics Engineers PSU Student Branch – IEEE (2019 – Current)
Center for Brain-Inspired Computing - C-BRIC (2018 - Current)

## PROFESSIONAL REFERENCES

**Karla Fant, MS**

- Professor, Portland State University
- Department of Computer Science
- Karlaf@pdx.edu

**Dan Hammerstrom, PhD**

- Professor Emeritus, Portland State University
- Department of Electrical and Computer Engineering
- Dwh@pdx.edu

**Christof Teuscher, PhD**

- Professor, Portland State University
- Department of Electrical and Computer Engineering
- Teuscher@pdx.edu