Christian Kauten

Graduate Research Assistant at Auburn University
https://github.com/Kautenja

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Education

- **Auburn University** — Auburn, AL
  Ph.D. Software Engineering, M.S. Software Engineering — *2017 - 2020*
  - Woltosz Graduate Fellow
  - Emphasis on machine learning/data mining and algorithm design/software development related to computer vision and precision timing
  - Committee: Prof. Xiao Qin (advisor), Prof. Ashish Gupta (advisor), Prof. Dean Hendrix
- **Auburn University** — Auburn, AL
  B.S. Software Engineering — *2013 - 2017*
  - Deans List: Fall 2016, Spring 2017

Research Experience

- **Auburn University** — Auburn, AL
  Research Assistant under Prof. Ashish Gupta — *2017-2020*
  - Used machine learning to develop models for blood center donor prediction
  - Research on financial sector vulnerabilities to GPS time spoofing
  - Developed deep learning based intelligence augmentation systems for autonoumous vehicles

Publications

1. Christian Kauten, Ashish Gupta, Xiao Qin, Han Li, and David Bevly. A perception augmentation system for autonomous vehicles. In *Pre-ICIS SIGDSA Symposium on Decision Analytics Connecting People, Data, and Things*, San Francisco, CA, USA, December 2018.

2. Xiaopu Peng, Christian Kauten, Chaowei Zhang, Thomas Heckwolf, Jianzhou Mao, Taha Tekreeti, and Xiao Qin. REDUX: Managing renewable energy in data centers using distributed UPS systems. In *IEEE SmartCloud*, New York, USA, September 2018.

Presentations

- *A Perception Augmentation System for Autonomous Vehicles*
  - 2018 Pre-ICIS SIGDSA Symposium (Prototype Demonstration) – San Francisco, CA (December 2018)

Awards, Grants & Honors

Department of Homeland Security PNT Research Grant 2018
Woltosz Graduate Fellowship ($4,000) 2017-2020
Eagle Scout Award 2011

Selected Open Source Projects (github.com/Kautenja)

- **Super Mario Bros for Open AI Gym** Python, C++
  A framework for training reinforcement learning agents to play Super Mario Bros. *2018*

Skills

- **Numerical Analysis and Computer Science** Machine Learning, Computational Science, Artificial Intelligence, Algorithm Design, Parallel Programming, Distributed Systems, Data Structures
- **Software Engineering** Agile Processes, Test & Behavior Driven Development, Software Documentation, Software Modeling, Object Oriented Design, Open-Source Deployment
- **Development** Python (preferred), C/C++, Swift, LaTeX, HTML, CSS, JavaScript
- **Linux Systems** network administration, cluster management, git, vim, ssh
- **Technology** Keras, TensorFlow, CoreML, SciKit Learn
- Ability to solve real-world problems using computational methods
- An extensive background in Software Engineering allows me to adopt new workflows and technologies quickly