Christian Kauten
Graduate Research Assistant at Auburn University
https://kautenja.github.io

June 19, 2019
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Education

Auburn University Auburn, AL
Ph.D. Software Engineering *2017 – 2020*

Auburn University Auburn, AL
M.S. Software Engineering (Non-Thesis) *2017 – 2019*

- Committee: Prof. Xiao Qin (advisor), Prof. Ashish Gupta (advisor), Prof. Dean Hendrix
- Emphasis on applications of artificial intelligence and data science

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 model donor retention for a US Blood Center
- Conducted DHS–funded research on financial sector vulnerability
- Developed a deep learning–based intelligence augmentation system 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.
3. Chaowei Zhang, Ashish Gupta, Christian Kauten, Amit V. Deokar, and Xiao Qin. Detecting fake news for reducing misinformation risks using analytics approaches. *European Journal of Operational Research*, 2019.

Presentations

A Perception Augmentation System for Autonomous Vehicles

– *2018 Pre-ICIS SIGDSA Symposium* San Francisco, CA
Prototype Demonstration *December, 2018*

– *2019 Auburn University Student Symposium* Auburn, AL
Poster Session *April, 2019*

Participation in Workshops and Conferences

- **Workshop on Synchronization and Timing Systems (WSTS) 2019** San Jose, CA
  National Institute of Standards and Technology (NIST) *March 25 – 28, 2019*

Awards, Grants & Honors

Department of Homeland Security (DHS) Research Grant 2018
Woltosz Graduate Fellowship . . . . . 2017 – 2020
Eagle Scout Award 2011

Selected Open Source Projects (https://github.com/Kautenja)

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

NESpy Emulation System Python, C++
A python interface for developing NES–based reinforcement learning environments. *2018*

Skills

Numerical Analysis and Computer Science Computational Science, Algorithm Design & Analysis, Artificial Intelligence, Machine Learning, Parallel Programming, Distributed Systems, Data Structures

Software Engineering Test & Behavior Driven Development, Software Modeling, Debugging, Profiling, Code Optizimation, Documentation, Source Control, Software Process

Programming Environments Python, C++, Swift, LaTeX, HTML, CSS, JavaScript

Technologies Keras, TensorFlow, CoreML, SciKit Learn, NumPy