Ryan Dreifuerst

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Education

The University of Texas at Austin (UT) – Austin, TX GPA: 4.0 Aug. 2019—Current

M.S./Ph.D. in Electrical Engineering

Advisor: Prof. Robert W. Heath Jr.

Research interests: machine learning for wireless communication

Technische Hochschule Lübeck (THL) – Lübeck, Germany GPA: 4.0 Sept. 2017—May 2019

Bachelor of Science in Electrical Engineering, Summa Cum Laude

Lab Experience: Radio frequencies, Microwaves, Communication Theory, and Control Systems

Milwaukee School of Engineering (MSOE) – Milwaukee, WI GPA: 4.0 Sept. 2015—May 2019

Bachelor of Science in Electrical Engineering, Summa Cum Laude

Engineering Honors societies: Tau Beta Pi and Eta Kappa Nu

Advanced courses in: Antennas and Wireless Theory, Machine Learning, DSP, Software-Defined Radios

Experience

University of Texas at Austin - Austin, Texas Aug. 2019-Current

Graduate Research Assistant

- Researching machine learning for mmWave and 6G communications
- Submitted SPAWC 2020 special session paper on mmWave and TeraHertz system design

Plexus Corporation - Neenah, Wisconsin June 2017-Sept. 2017, July 2018-Sept. 2018

Digital Hardware Design Intern

- Designed, simulated, and tested custom Verilog RTL for medical devices
- Schematic capture using Cadence and Altium
- Successfully implemented full OSI communication model for FPGA-FPGA communication

Projects

- Deep Learning-based Carrier Frequency Offset Estimation with One-Bit ADCs (Tensorflow)
- Wrist Rescue - wearable fall detection monitoring for elderly users (Python, Sci-kit Learn, C++)
- Wireless Fingerprinting – In Progress (Python, Tensorflow)
- Hands-On Deep Learning Repository (Tensorflow, Keras, Sci-kit Learn, Numpy, Pandas)
- One-shot whale fluke image classification (TensorFlow, Keras)
- FPGA climate control system (VHDL, C)