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Eric C. Yeats

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EDUCATION

Vanderbilt University, B.E. — May 2019
Major in Computer Engineering
Minor in Interdisciplinary Neuroscience
GPA: 3.55 / 4.0

EXPERIENCE

University of Florida, ECE Dept. — Summer 2018, Summer 2017, Summer 2016
Research Assistant (PI: Dr. Erin Patrick)

- Worked closely with a team of Research Professors and Graduates on a Brain-Computer Interface application
- Developed a Compound Action Potential (CAP) simulation that represented rat *in-vivo* observations
- Scripted NEURON simulation software with Python to automate 1000s of concurrent simulations
- Scripted creation of publishable figures for CAP simulation; compiling into a paper

Vanderbilt University, BME Dept. — Fall 2018, Spring 2018, Fall 2017
Research Assistant (PI: Dr. E. Duco Jansen)

- Developed computational model of invertebrate nerve and replicated temperature-induced inhibition
- Predicted inhibition profile of 1000s of varying diameter within realistic *Apysia fasciata* nerve
- Calculated measureable CAP of active population to research the CAP as an inhibition indicator statistic for real neural inhibition scenarios
- Presented poster of research at BMES 2018 Conference in Atlanta, GA
- Discussed possibilities of packaging COMSOL optical-heating simulation with scripted NEURON simulation

Institute for Software Integrated Systems, Vanderbilt — Spring 2018, Fall 2018
Research Intern (PI: Dr. Janos Sztipanovits)

- Partook in weekly research seminar on human-cyber-physical interaction systems
- Presented societal scale implications of emerging technologies such as Autonomous Vehicles (AVs), Unmanned Aerial Vehicles, and Transactive Energy
- Selected for AV research internship at OFFIS in Oldenburg, Germany with NSF Grant
- Wrote NSF article detailing my research in Germany on AVs with a focus on societal-impact considerations

OFFIS – Institut für Informatik, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany Summer 2018
Research Intern (PI: Mr. Thomas Peikenkamp)

- Parameterized traffic criticality metrics for use in traffic system modeling during 2 month internship
- Designed traffic scenarios with Traffic Sequence Charts (graphical traffic system modeling language)
- Edited academic article on human-machine-interface quantitative testing method for English grammar
- Conducted literature review on 20+ traffic criticality metric publications and compiled information
- Delivered presentation on criticality metric parameterization to CrEST group and OFFIS

LEADERSHIP

Eagle Scout Rank Spring 2015
Building 2 Handicap-Friendly
Picnic Tables for Camp Crystal Lake

- Designed tables from basic materials
- Managed budget of $600
- Directed group of >20 adults and scouts during construction day

RELEVANT SKILLS

Familiar Programming Languages
C, C++, Java, HTML, Javascript, Python, MATLAB, ARM, AVR 8-Bit
Software Experience
NEURON, Matplotlib, NumPy, Matlab, Wolfram Mathematica, Excel
Operating Systems / Embedded Systems
Windows, Linux / Atmel µC's, BeagleBone

INTERESTS

Neuroprosthetics, Real-Time Computing, Embedded Systems, Brain-Computer Interfaces, Circuits, Signal Processing, German Language

CONTACT INFO

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