Aidan Johnson

20016 18th Ave NW
Shoreline, WA 98177

+1 (206) 919-3859
j.a.johnson@ieee.org
aidanjohnson.github.io

EDUCATION

Bachelor of Science in Electrical Engineering — September 2014 – June 2018
University of Washington — Seattle, WA
Cum Laude — *GPA:* 3.83/4.00

– *Concentration Coursework:* Design & Application of Digital Signal Processing, Medical Imaging, Random Signals in Communications, Digital Image Processing, Discrete-Time & Continuous Linear Systems, Digital Circuits & Systems, Data Structures & Algorithms, Synthetic Biology, Devices & Circuits, Genome Informatics

EXPERIENCE

Student Research Assistant — September 2017 – September 2018
Applied Physics Laboratory — University of Washington

– Designed and developed, in collaboration with a research associate, microphone and filtering circuits, ICs, and data acquisition software for an autonomous bat detection and tracking ultrasonic acoustic array on the ARM architecture.

Energy Intern — June – September 2017
Wastewater Treatment Division — King County, DNRP

– Worked and communicated in multidisciplinary teams, division-wide in treatment plants and offsite facilities. Analysed energy data and estimated energy cost savings from energy efficiency measures using statistical models.

Undergraduate Research Assistant — February – June 2016
Renewable Energy Analysis Lab — University of Washington

– Supported post-doctorate researcher in power systems economics and energy storage integration. Surveyed research literature on energy storage capacity and location optimisation problems.

PROJECTS

Musical Instrument Classification — May – June 2018

– Designed with a partner a real-time musical instrument classifier able to distinguish solo musical instruments based on the perceptual feature of timbre using a support vector machine (SVM) machine learning model for implementation on a low-cost and memory-constrained TI DSP.

Conway's Game of Life — March 2018

– Implemented this cellular automaton game on an FPGA with the current state of the "cells" being indicated by patterns on a colour LED array.

Impressionist Painting Effect — December 2017

– Implemented a non-photorealistic rendering (NPR) algorithm in MATLAB for creating an impressionistic oil painting effect on digital images given layered curved brush strokes parameters set in a GUI.

Motor Speed Control — March 2017

– Led three-person team of students in developing and prototyping a pulse width modulation (PWM) semiconductor-based speed control for small DC motor for a design project.

SKILLS

Programming	Python, MATLAB, C, Java (intermediate); Verilog, LaTeX, C++ (basic)
Technical	Git, Multisim, Quartus, ModelSim, SolidWorks (intermediate); Microsoft Office (advanced)

HONOURS

Emeritus UW Institute for Neuroengineering Post-Baccalaureate Fellow — June – September 2018
Eta Kappa Nu (HKN) - Iota Upsilon Chapter — 2017 – present
IEEE Member — 2015 – present