David A. Buzzell

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EDUCATION

Carnegie Mellon University Pittsburgh, PA
Bachelor of Science in Electrical and Computer Engineering *May 2017*
Bachelor of Science in Music and Technology *August 2017*

WORK EXPERIENCE

Software Engineer at iRobot *March 2019 – present*

- Architect the automation framework (Pytest) for validating quality of robot firmware through early design process and cross-team collaboration efforts
- Interpret robot log files through automatic extraction of useful information for test case evaluation and long-term analysis of software performance
- Support the Scrum process with project code style enforcement (Pylint), project documentation (Sphinx), and presentation of design choices

Associate Software Engineer at iRobot *November 2017 – February 2019*

- Authored manual test plans to evaluate the software on the next generation's autonomous cleaning robots improving on smarter navigation, intuitive user interaction, and overall system stability against many customer environments
- Support the manufacturing process in the factory for high quality assurance during the design process and throughout the assembly line
- Document all technical processes to educate new team members and to provide cross-team support within the company

PROJECTS

Depth-Controlled Ambisonic Audio at Carnegie Mellon *May 2017 – August 2017*

- Designed a system that tracks the user's body in a 3D visual space to control high order ambisonic audio in a 360° speaker ring for creative experiences
- Uses Kinect sensor, software packages for MaxMSP, and TouchOSC mobile app

Hybrid Instruments at Carnegie Mellon *May 2016 – August 2016*

- Engineered through real-world design pre-amp circuitry (EAGLE) for contact microphones on 3D printed phone cases with string bows attached
- Performed analog signal measurement in hardware in conjunction with developing portable software apps to verify acceptable design criterion

TECHNICAL SKILLS

Python, C/C++, Bash/UNIX, Git, MATLAB

COURSEWORK

CS8803-O01: Artificial Intelligence for Robotics

18-491: Fundamentals of Signal Processing
18-349: Embedded Real-Time Systems
18-551: Signal Processing Systems Design
18-493: Electroacoustics
57-347: Electronic & Computer Music
15-323: Computer Music Info Processing

LEADERSHIP POSITIONS

Intern Mentor at iRobot *May 2019 – August 2019*

- Supported the internship process through direct delegation of mutually desired responsibilities in order to define meaningful experiences
- Facilitated the creation of a culminating final project used in automation