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*

CERTIFICATIONS

Certified Scrum Master (**CSM**) — *January 2020*
Certified Scrum Product Owner (**CSPO**) — *January 2020*

WORK EXPERIENCE

Software Engineer at iRobot

Robot Simulator Specialist — *November 2019 – March 2020*

- Supported uptime of simulated robots in AWS Robomaker running 50 mission hrs/day
- Enhanced automatic log extraction to evaluate simulated robot performance for every robot cleaning mission and auto-populate online reports through SQL queries
- Reviewed contributions to 3 different code repositories in C++, ROS, and Python
- Supported Scrum policy changes to improve feature reporting and delivery

Automation Infrastructure Developer — *February 2019 – November 2019*

- Architected new company-wide Python automation for robot software testing
- Automated robot log file evaluation, reducing manual log review time by 5 hrs/week
- Reduced manual testing time by 30% through weekly 1:1 training sessions
- Collaborated with an 8-person team to deliver new software features every 3 weeks
- Pioneered 466 code standards (Pylint) and distributing code documentation (Sphinx)

Product Delivery QA — *November 2017 – February 2019*

- Designed 40% of manual test plan for next-gen autonomous cleaning robot software
- Assisted factory operations in quality assurance for release of the Braava Jet m6 robot
- Authored first comprehensive documentation of terms and acronyms used at iRobot
- Mentored an undergraduate intern for 3 months validating new product delivery features and development of Linux process monitoring system for new automation

RESEARCH PROJECTS

Depth-Controlled Ambisonic Audio — *May 2017 – August 2017*

- Interfaced with Microsoft Kinect sensor to track user movements in a 360° speaker ring
- Relayed these movements through MaxMSP to 2nd order ambisonic audio processing
- Replicated a 3D auditory experience by decoding signals for an 8-channel output

Hybrid Instruments — *May 2016 – August 2016*

- Engineered pre-amplifiers for contact microphones with PCBs designed in EAGLE
- Evaluated performance on 3D printed phone cases with string bows attached
- Characterized analog signal measurement with mobile app development for QA

RELEVANT SKILLS

Technologies: Python, C/C++, Bash, MaxMSP, SQL (Presto)
Interfaces: MATLAB, EAGLE, ROS, Pytest, OSC
Tools: Git, Pylint, Regex, Sphinx, JIRA
Audio: Ableton Live, Pro Tools, Audacity, MuseScore, Reason

COURSEWORK

CS8803-O01: Artificial Intelligence for Robotics *(for the Georgia Tech OMSCS program)*

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

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