RYAN DALBY

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Salt Lake City, UT

EDUCATION

The University of Utah *May 2022*
M.S. in Mechanical Engineering- Robotics
B.S. in Mechanical Engineering
Minor in Computer Science
Overall GPA: 3.897

EXPERIENCE

Seagate Technology May 2021 - August 2021
Robotics Software Engineer Intern *Longmont, Colorado*

- Implemented new software compatibility for a legacy robotic tool in C#/.NET by documenting and porting tool IO, implementing SCARA robot kinematics, and creating software to convert learned robot positions to be compatible with the new software. Extensively documented porting process, tested software on hardware, and described a plan for replacing legacy software.
- Supported a robotic tool throughout the summer. Completed high priority backlog items, tested on hardware, and released software to production, communicating with teams around the world.
- Investigated creating Cognex Vidi machine learning-based models for defect detection and OCR. Labeled data to train models and documented how to develop models.

Seagate Technology May 2020 - December 2020
Robotics Software Engineer Intern *Longmont, Colorado*

- Leveraged machine learning to predict robotic tool failures. Explored various models such as support vector machines and recurrent convolutional neural networks implemented using Python and Keras.
- Constructed a data wrangling pipeline to extract trainable features from raw log data.
- Created ML.NET machine learning ONNX model consumption platform.
- Expanded team's machine learning knowledge. Integrated machine software with a machine learning data platform using C#/.NET.
- Reliably communicated with remote team members around the world.

Code Corporation May 2019 - August 2019
Mechanical Engineer Intern *Draper, UT*

- Utilized the iterative engineering design process through CAD (SOLIDWORKS) and rapid prototyping to develop an injection-molded bracket to combine multiple parts into a single new product.
- Effectively made various changes to existing products through an engineering change order process to reduce manufacturing costs. Assisted in conducting product testing to determine possible improvements.
- Employed agile project management in a professional work environment to increase productivity and communication.

The University of Utah- Dr.Meredith Metzger April 2018–December 2018
Glide Maneuver Experiments of a Small Delta-Wing UAV *Salt Lake City, UT*

- Attained UROP funding to research and develop a UAV for glide maneuver experiments.
- Integrated an IMU, altimeter, and pressure transducer by means of sensor fusion to control elevon surface servo motors. Developed on an Arduino using I2C to interface with sensors.

TECHNICAL STRENGTHS

Programming Languages
- Most experienced with C# and Python.
- Experienced with C++/C, MATLAB, and Java.
- Limited experience with JavaScript.

APIs & Tools
- Most experienced with .NET, Arduino, scientific Python libraries (Numpy/Pandas/Matplotlib/Scipy), PyTorch, Sci-kit Learn, Sci-kit Image, Git, Jupyter, Linux (Bash), Windows, MacOS VScode, Visual Studio, and Vim.
- Experienced with SOLIDWORKS (CSWA certified), Jira (Scrum), LaTeX, and Docker.
- Limited experience with the ROS and Three.js.

RELEVANT COURSEWORK

Graduate Coursework Deep Learning, Machine Learning, Image Processing, Virtual Reality, Classical Control Systems, Robotics, and Robot Control.

Undergraduate Coursework Numerical Methods, Mechatronics, Engineering Design, Software Practice, and Algorithms and Data Structures.