STEVEN DIRTH

Software Engineer

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Git
C/C++
C#/.NET
Azure
Java
Angular

EDUCATION

2017 – 2021 **Bachelor's Degree** — **Iowa State University**
Dean's List Fall 2017 | Spring 2018

WORK EXPERIENCE

May – Aug 2019 **Software Developer Intern – Data Science & Informatics** — **Corteva Agriscience**
I redesigned a solution for moving and managing data between systems using .NET, .NET Core, Entity Framework Core, Azure, and Angular. The backend for the project was done using Azure Functions serving as both the web API and data processor. The frontend was written in Angular 5 utilizing Typescript and SCSS. I also created a windows service to load data into the backend. I used Azure DevOps, Artifactory, and Octopus Deploy for deployment.

May – Aug 2018 **Test Department Intern** — **Sears Seating**
I performed various tests (both automated and manual) on a number of seats. This included designing the test, setup, data recording, and teardown. The major project I worked on was a semi-automated test involving an environment chamber, a NI cRIO, several sensors and multiple actuators

2018 and prior **Various Employment** — **Iowa State University, Monsanto Company**
I worked for ISU Dining during the 2nd semester of the 2017-2018 school year. I also worked for Monsanto the two summers before that.

PROJECTS

2017 – **Asteroid** — **Cardinal Space Mining**
A cross platform desktop application written in C++ using the Qt and boost frameworks. The application acts as a control panel for CSM's robots

2017 – 2018 **Pavonis** — **Cardinal Space Mining**
The main robot control software which runs on a Xilinx MicroZed. The software is written in C++ using the boost libraries and is cross compiled for the MicroZed. Many improvements were made this year, but the most important was the distributed sensing protocol which allows the addition or removal of sensors without requiring any code changes to this project.

2018 – 2019 **Marineris** — **Cardinal Space Mining**
The main robot control software which runs on a Xilinx MicroZed. The software is written in C++ using the boost libraries and is cross compiled for the MicroZed. A major improvement this year was to the motor communication, as we were able to get sensor feedback from the motor controllers.

2017 **Development Server** — **Cardinal Space Mining**
I set up and maintain an Ubuntu server which hosts a GitLab runner for continuous integration and unit tests, as well as provides a way for new members to compile code without installing a virtual machine or full blown linux on their personal devices.

ACTIVITIES

2019 –	**Controls Project Director**	Cardinal Space Mining
2017 –	**Developer**	Cardinal Space Mining
2016 – 17	**Member**	National Honor Society
2016 – 17	**Developer**	FIRST Robotics Competition
2016 – 17	**Co-Captain**	FIRST Tech Challenge
2014 – 17	**Developer**	FIRST Tech Challenge

HONORS

ISU Dean's List	Spring 2018
ISU Dean's List	Fall 2017
Eagle Scout	July 2016