Matthew Martin Orth

Computer Engineer pursuing a career in
Software Engineering and Machine Learning

EXPERIENCE

Engineering Development Program, John Deere
August 2020 – Present

- Test Automation Engineer: Will test computer vision solutions using Python

Product Engineering Intern, John Deere
May 2019 – August 2019

- Developed a guidance (autonomous) software feature for the family of in-cab embedded displays
- Implemented efficient and maintainable software features in a legacy code environment
- Created code to analyze CAN messages to ensure efficient operation of the guidance system
- Verified implementations through automated and manual testing and code and design reviews

Information Technology Intern, John Deere
May 2018 – August 2018

- Automated AWS WorkSpaces and Security Groups creation for a faster and secure cloud experience
- Researched and recommended different technologies to help maximize John Deere's efficiency
- Implemented and configured cloud security tools to improve John Deere's security in the cloud

IT App Development Intern, Principal Financial Group
May 2017 – August 2017

- Mitigated software vulnerabilities on an application to ensure user security
- Collaborated with the business to create a product that decreases server restart time
- Created requirements for an application that ensured compliance with regulations

PrISUm Solar Car, Iowa State University
2016 – 2017

- Effectively collaborated with team members to create quality software projects
- Participated in the entire software development process: planning, creation, testing, and maintaining

EDUCATION

Iowa State University, B.S., Computer Engineering
Ames, IA; Graduated: May 2020

- GPA: 3.99; Summa Cum Laude; College of Engineering Dean's List – Fall 2016 to Fall 2019
- Honor Societies: Eta Kappa Nu (HKN) and IEEE
- Activities: Cyber Defense Competitions and PrISUm Solar Car

Iowa State University, MEng., Computer Engineering
Ames, IA; Expected Graduation: December 2021

- Emphasis in Machine Learning and Embedded Systems

TECHNICAL SKILLS

Programming Languages:

Assembly	●●●●●○○○○○
C / C++	●●●●●●●●○○
HTML/CSS	●●●●●○○○○○
Java	●●●●●●●●○○
JavaScript	●●●○○○○○○○
Java Spring	●●●●●●●○○○
MongoDB	●●●●●○○○○○
Python	●●●●●●●○○○
Qt	●●●●●●●○○○
SQL	●●●●●●●●○○
TensorFlow/Keras	●●●●●●○○○○

Concepts/Tools:

Android (Kotlin)	●●●●●●●●○○
AI/ML/DL	●●●●●●●○○○
Automated Testing	●●●●●●○○○○
AWS/Azure	●●●●●○○○○○
GIS	●●●●●●●○○○
Git	●●●●●●●●○○
iOS (Swift)	●●●●●●●●○○
Jenkins	●●●●●●●○○○
Linux OS	●●●●●●●○○○
REST APIs	●●●●●●●○○○

PROJECTS

Single Line Shift (Straight Track), John Deere

- A guidance Gen4 Display feature that allows the operator to change the position of the current guidance track without affecting the original tracks

Allergy Safe, Personal Project

- An Android and iOS app that helps users with food allergies or intolerances ensure packaged food products are free of their allergies or intolerances

Intelligent Code Editor, ISU Senior Design (1st place)

- An IntelliJ IDE plugin that translates natural language (English) to equivalent Java code

ICE: Literate Programming in Intelligent Code Editor,
Pending ISU Senior Design Paper Publication

- A paper describing and comparing the intelligent code editor project to similar systems

Horn and Lights/Dynamic Array, PrISUm Solar Car Project

- Created the software code for the horn and lights and dynamic array for the solar car