Michael James Keller

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Links

github.com/mkeller36
linkedin.com/in/mjkeller97/

Languages

MatLab	●●●●○
Simulink	●●●●○
StateFlow	●●●○○
Python	●●●○○
C	●●●○○

Competencies

Git | MBSD | Control Algorithms | Agile Software Development | MiL | SiL | HiL | Vector CANalyser

Coursework

Control of Dynamic Systems
Digital Signal Processing
Embedded Systems
Linear Controls

Projects

Object Oriented Covid Tracker App
Image Processing Coin Counter
2 Axis PID Ball Balance
PID Two Axis Solar Tracker

Education

Georgia Institute of Technology
BS Mechanical Engineering

Work Experience

Ford Motor Company — **Software Engineer**
Vehicle Controls Group — **2022 - Present**

- **Developed software requirements** for **Simulink** and **C** to ensure **functional safety standards (ISO 26262)** were met on body control modules.
- **Developed software requirements** to transition architecture to **micro-service architecture** with zonal ECUs to increase modularity.
- Translated **Technical Safety Requirements** into software specifications for stop lights and turn signals to be developed by suppliers.

Agile | *Requirements Development* | *Functional Safety* | *Controls Development*

John Deere — **Software Engineer**
Intelligent Solutions Group — **2021-2022**

- Worked on multinational **Agile** team environment to design and implement controls for F12's E21™ transmission in **C** and **Simulink** , resulting in transmission shifting into gear correctly on the first test.
- Wrote Software in the Loop **(SiL)** tests in **Allsim** .
- Wrote Model in the Loop **(MiL)** tests in **Simulink** .
- Wrote signal interface code utilizing **SAE J1939** and **C** .
- Supported on-vehicle testing in lab and field by **programming payloads** .
- Implemented state machines for control algorithms using **Stateflow** .
- Developed feature to toggle CAN information sent from transmission during debugging.

Matlab | *Stateflow* | *Simulink* | *MBSD* | *C* | *Git* | *Agile* | *Controls Development*

John Deere — **Design Engineer**
Drive Train Design Group — **2020-2021**

- Redesigned and successfully implemented 8R front axle final drives to achieve cost savings goals.
- Developed **python** program to find parts with a high frequency of deviation requests.
- Designed riveted disk brakes for 7R, 8R, and 9R tractors.

Python | *NumPy* | *Pandas* | *Creo* | *Machine Design* | *Windchill*

Certificates

MAR 2022	**Simulink for Automotive System Design**	**Mathworks**
MAY 2022	**Stateflow for Automotive Applications**	**Mathworks**
JUNE 2022	**Simulation-Based Testing with Simulink**	**Mathworks**