
EMPLOYMENT

Senior Machine Learning Engineer II - Perception	Cruise LLC	Jun 2018 - Present
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- Develop and implement strategies for adapting machine learning models to multiple vehicle and sensor platforms utilizing: multi stage training, data augmentation and simulation data
- Implement, test, analyze, deploy, and monitor safety critical features improving overall tracking performance with a focus on data association and multi sensor fusion
- Act as a technical leader on the team through mentorship, roadmapping, and project management
- Maintain onboard vehicle stack to extract model input features and process model outputs for downstream consumption
- Collaborate with partner teams to solve problems throughout perception such as perceiving non critical objects
- Utilized machine learning techniques including: feature engineering, data mining, loss weighting, and model architecture changes to improve model behavior and enable higher speed tracking
- Automated data pipelines with internal libraries to ultimately fully automate model data generation, retrain, and deployment with a single command; Increased developer iteration speed by 3x and enabled the team to ship model iterations on a monthly cadence.
- Contributed to replacing legacy systems with machine learning solutions for tracking problems

Software Engineer - Sensors and Special Programs	The Boeing Company	Jul 2016 - May 2018
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- Implemented sensor data fusion algorithms with a small team of 5 contributors
- Created standalone libraries to be integrated into multiple Boeing platforms
- Designed and developed a modular library capable of running multiple related algorithms and combining their results
- Implemented and maintained an application to perform offline simulations which integrated with internally developed tools to evaluate algorithm performance
- Prototyped, tested and analyzed a new Kalman filtering functionality to increase performance of algorithms and enable new capabilities

EDUCATION

Rolla, MO	Missouri University of Science and Technology	Aug 2012 - May 2016
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- B.S. in Computer Science, Magna Cum Laude, GPA: 3.69
- B.S. in Computer Engineering, Magna Cum Laude, GPA: 3.69

LANGUAGES AND TECHNOLOGIES

- C++; Python; PyTorch; Robot Operating System (ROS); Bazel; CMake; Git; Boost;