

Academic Highlights

Dual Bachelor of Science in Electrical Engineering and Physics at The University of Alabama May 2015
Minor in Mathematics at The University of Alabama May 2015
GPA: 4.0/4.0

Work Experience

Facebook Reality Labs Research – Research Software Engineer April 2020

- Implement state-of-the-art deep learning algorithms in compute-constrained environments
- Design, implement, and test innovative proof-of-experience systems for determining user intent via AR wearables
- Serve as the bridge between research and product engineering

Microsoft – Senior Software Engineer (FTE) June 2015-April 2020

- Develop traditional machine learning and deep learning models to solve business and natural language processing problems
- Design, implement, and maintain a question answering engine for technical questions
- Design, implement, and maintain a cloud database sizing recommendation engine
- Design, implement, and test an autonomous driving simulator leveraging the Unreal 4 Engine
- Design, implement, and test reference architectures, features, and tutorials related to autonomous driving for the Microsoft Azure platform

Robotic Automation Researcher Dec 2011 – June 2015

- Design and implement an autonomous control system for a robotic lunar excavator
- Design, implement, and test computer vision algorithms for robotic localization in harsh environments
- Model and fabricate robotic parts

Technical Skills

Programming Languages

- Expert: C, C++, C#, Python, T-SQL, PSQL
- Proficient: Java, JavaScript, Typescript

Software Packages

- Python: Keras, Tensorflow, PyTorch, Scikit-Learn, Numpy, Scipy, Pandas, Matplotlib, Django, NLTK, Flask
- C/C++: ROS, OpenCV, PCL, Boost, Unreal Engine, Eigen, Ceres

Publications:

- Practical Deep Learning for Cloud, Mobile & Edge – O'Reilly publications
 - Authors: A. Koul, S. Ganju, M. Kasam
 - Guest-wrote chapter 16: "Simulating a Self-Driving Car using End to End Deep Learning with Keras" with A. Sharma
- Distributed Deep Reinforcement Learning on the Cloud for Autonomous Driving
 - Authors: M. Spryn, A. Sharma, D. Parkar, M. Shrimal
 - Presentation: International Conference on Software Engineering, 2018
- The Development of Synergistic Optoelectronics Based on Zinc Oxide Semiconducting Nanowires
 - Authors: A. Gupta and M. Spryn
 - Presentation: International Microelectronics and Packaging Society, 2012
- Design of Nanosensing Platform Based on Zinc Oxide Nanowire Arrays
 - Authors: A. Gupta, M. Spryn, B. Kim
 - Conference Publication: International Symposium on Circuits and Systems, 2012
- Packaging and Sensing Platform using Opto-electronic Zinc Oxide Nano-Heterostructure Integration
 - Authors: A. Gupta, M. Spryn, B. Kim
 - Conference Publication: Electronic Components and Technology Conference, 2013