

# Quinn Meyer

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## EDUCATION

- Master of Science in Data Analytics**.....2022  
Western Governor's University, Salt Lake City, UT
- Bachelor of Science in Mechanical Engineering**.....2014-2018  
Purdue University, West Lafayette, IN

## EXPERIENCE

**Aptiv** Troy, MI  
Data Scientist - Camera Systems 2018 – Present

- Technical lead for ad hoc data analysis using unstructured camera data in Python, extracting data-driven insights, developing visualizations, and presenting results to upper management and customers.
- Full-stack software engineer developing image processing applications to measure image quality metrics such as focus score, SNR, demosaicing, color calibration, dark noise, etc. for manufacturing.
- Analyzing test and manufacturing data to validate new camera testing methods that reduce space on the factory floor by 90% for end of line quality tests.
- Developing object detection software using TensorFlow to detect and segment camera targets in highly distorted raw images to automate preexisting manual image preprocessing software at 99% accuracy.
- Created new way to quantify image sensor performance using sensor data, leveraging Fourier signal processing, to assist analyzing camera module focus score by isolating sensor perceptive performance.
- Developed Python software that interfaces with Solidworks for mechanical design engineers to ensure camera field of view and boresight error fits within dimensions of a glareshield bracket..
- Acting as a project manager and liaison with customers, gathering requirements, translating business needs into technical requirements, and developing presentations for technical / non-technical stakeholders.

### High-Accuracy Geometric Camera Calibration

Showcase Portfolio Project | [Efovee.com](https://efovee.com) 2022 - Present

*As a data scientist working in the camera industry, I have a great appreciation for the mathematics behind the analysis and application of cameras. Here, I use computer vision techniques to geometrically calibrate cameras exceeding industry standard solutions such as Imatest or Axios 3D by all metrics.*

- Creating unique checkerboard detection algorithm from scratch that can detect checkerboard corners without any user inputs in highly distorted images down to a checker size of 10 pixels.
- Developing novel camera calibration software with baseline triangulation error of less than 0.06 degrees for low-cost (\$20) embedded Arduino cameras, achieving automotive accuracy requirements by all metrics.
- Reducing the cost of the calibration setup from tens of thousands of dollars to a fifty-dollar checkerboard.
- Calibrates a camera in less than 8 seconds, around two times faster than industry solutions.
- Using git and github for proper version control and object-oriented programming in Python.
- Developing an example business website in HTML and CSS showcasing the project as well as featuring examples of my data visualization and presentation capabilities.

## SKILLS

**Programming Languages:** Python, SQL, MATLAB, R, HTML

**Python Packages:** Jupyter, Numpy, Pandas, Scikit-Learn, OpenCV, Pillow, Plotly, TensorFlow, Keras

**Tools & Methodologies:** Tableau, Git, Jira, ETL, Machine Learning, Deep Learning, Computer Vision, Signal Processing, Database Design, Data Visualization, Data Analysis, Microsoft Office, Technical Writing, CAD