Quinn Meyer

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EXPERIENCE

Data Scientist – Camera Systems and Operations **2018 - 2022**
Aptiv, Troy, Michigan
Merging Math & Machine Learning for Automotive Manufacturing Applications

- Used unsupervised learning (**K-Means Clustering, MATLAB**) to create new testing process that identified cameras likely to fail temperature trials, reduced product engineering design cycle by 2-4+ weeks.
- Developed object detection algorithm (**Python, Tensorflow, Neural Network, OpenCV**) to automate detection of optical targets during testing, reduced data post-processing and manual work time by 95%.
- Built new objective function and optimization algorithm (**Python**) to calibrate cameras for Computer Vision applications, increased calibration accuracy while reducing time, saving the company $500k+.
- Created new way to quantify image sensor performance, leveraged Fourier Signal Processing to determine focus score (**Python, Pandas, Numpy**), used to reduce camera failure investigation time by 2-4 weeks.

End-to-End Software Development to Support Testing & Operations

- Collaborated with cross-functional teams to define metrics and measure camera performance, analyzed competitor landscape (**Excel**) to set establish acceptance criteria and offer competitive products.
- Created end-to-end software package (**MATLAB**) for deployment in manufacturing process to automate testing and data collection, ensured cameras met specification on metrics such as Focus Score, etc.
- Analyzed test & manufacturing data (**Python, MATLAB**) to validate new camera testing methods that used less space on the factory floor, reduced cost of testing by 92%.
- Designed and deployed custom objective function optimization algorithm (**MATLAB**) to calibrate camera alignment on custom testing rig, reduced annual hardware and maintenance costs by $300K+.
- Built data pipelines and storage methodology to ingest and clean (**Python**) testing and calibration data.
- Acted as project manager and liaison with customers, gathered requirements, translated business needs into technical requirements, and gave presentations to technical / non-technical stakeholders / customers.
- Developed integration with 3rd party software (**Python, Solidworks**) to automatically design structural hardware, ensuring product met vision requirements, reduced development program delay by 4+ weeks.

PROJECTS

Prioritizing Map Objectives to Maximize Wins in League of Legends (LINK)

As an avid League of Legends player, I've seen how different teams have various strategies in how they approach objectives across the map. Here, I use data (machine learning) to understand if map objective prioritization can impact the ability to win a game and use these insights to build new strategies.

- Conducted exploratory data analysis (**Python, Pandas**) from game records (10K+ records), quantified player actions and identified the most commonly sought-after objectives and order.
- Experimented with machine learning models (**Python, SkLearn, Logistic Regression, Random Forest**) and leveraged L1 regularization to reduce overfitting, built final model with 90.2% accuracy.
- Surfaced insights on key map control areas to maximize likelihood of win, built new strategies surrounding controlling the southern-most part of the map as critical objective to victory.

EDUCATION

Western Governor's University, Salt Lake City, UT **Dec 2022**
Master of Science – Data Analytics, GPA: 4.0 / 4.0
Relevant Coursework: Data Mining, Predictive Modeling, Exploratory Data Analysis, Data Acquisition

Purdue University, West Lafayette, IN **May 2018**
Bachelor of Science – Mechanical Engineering, GPA: 3.6 / 4.0

SKILLS & CERTIFICATIONS

Programming: Python (Pandas, SkLearn, Tensorflow, Numpy, Keras, Pillow), R, SQL, MATLAB, HTML
Software: Tableau, Git, Microsoft Word, Excel, Powerpoint, Jira, ETL
Others: Machine Learning, Deep Learning, Computer Vision (OpenCV), Signal Processing