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ALLAN REYES

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EMPLOYMENT

Software Dev. Engineer II **Amazon, Seattle** **September 2016 – Present**

- Researched and developed a Machine Learning model for predicting underinflation in tires leveraging telemetry data. Demonstrated how these predictions could be used to alert delivery stations preemptively, positively impacting the safety of drivers and the health of vehicles.
- Researched and developed a Machine Learning model for classifying valid cranking events directly from raw voltage measurements. Showed how the minimum voltage during valid cranking instances could be used for tracking battery health cross Amazon's delivery fleet.
- Researched and developed a Machine Learning model for detecting vehicle collisions in Amazon's delivery vans using telemetry data. This reduced the false positive rate from 80% to 20% which improved the experience of delivery stations that were received collision alerts.
- Designed and developed a platform that processes and annotates videos from Amazon's delivery vans to generate Ground Truth datasets. This enabled vision-based Machine Learning models to support initiatives such as driver/vehicle activity recognition and other on-road classification tasks.
- Designed and developed a platform for ingesting vehicle telematics to provide datasets for training and validating Machine Learning models that support initiatives such as fleet management, driver monitoring and vehicle safety.
- Designed and developed a distributed service in charge of providing contact lookup information which enabled critical customer-facing features for a new Amazon Web Services product.

Software Dev. Engineer I **Amazon, Seattle** **August 2014 – September 2016**

- Designed and developed "Atlantis", a Machine Learning system that reduces the need for humans to act upon 5% of queued orders for fraud detection, positively impacting the scale of Amazon's business.
- Developed a new module for re-evaluating Amazon orders for fraud. This supported the launch of multi-factor authentication (MFA) challenges presented to customers during the "check-out" experience.
- Integrated statistical analysis tests to deployment pipelines to detect anomalies between existing and new behavior due to code changes. This reduced bad deployments in 60% across all fraud detection systems.

Software Engineer, remote **Jarvam, Texas** **March 2012 – May 2014**

- Implemented a lab module integration with the current SmartShops Web System which allowed users to manage new orders, the production cycle, and the status of each order.
- Designed and developed an Android app to scan the lab orders and process their status. Reduced the need of workstations in the lab and improved production cycle efficiency by approximately 50%.
- Designed and developed a Business Intelligence reports integration with the current SmartShops Web System. Facilitated decision-making process for all managers and supervisors.

EDUCATION

Seattle, WA **Georgia Institute of Technology** **Fall 2014 – Fall 2019**

- **Degree:** Master of Science, Computer Science. GPA: 3.9
- **Specialization:** Machine Learning

Cuernavaca, Morelos **ITESM, Campus Cuernavaca** **Fall 2010 – Spring 2014**

- **Degree:** Bachelor of Science, Computer Science. GPA: 3.6

PROJECTS

- An overview of projects I have worked on is available: https://github.com/rey-allan

TECHNOLOGIES

- **LANGUAGES:** Python, Java, JavaScript, TypeScript
- **FRAMEWORKS:** PyTorch, Scikit-Learn, OpenCV, React
- **INFRASTRUCTURE:** AWS