Allegra Nichols

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Objective

A motivated engineer offering creativity, critical thinking, quick learning to add to a progressive forward-thinking company.

Education & Certifications

Nanodegree, Intro to Self Driving Cars — **Feb 2020**
Udacity

Bachelor of Science,Computer Engineering — **Apr 2016**
Florida A&M University, Tallahassee, Florida

Project Experience

Traffic Light Classifier - Developer — **May 2020**
Udacity, Austin, TX

- Designed with TensorFlow, deep and convolutional neural networks, LeNet
- Utilized computer vision techniques to transform images for classification
- Achieved approximately > 95% recognition accuracy

Auto-wheel Measurement Tool Setup & Configuration — **Mar 2020**
Samsung Austin Semiconductor, Austin, TX

- Helped to setup the tool to measure the wheelbase for robot VHL in FAB
- Configured to connect to oracle database using UDP messages
- Created relational SQL queries to view data in UI to assist with forecasting of wheel orders for replacement

Advanced Lane Finding - Developer — **Mar 2020**
Udacity, Austin, TX

- Designed with advanced computer vision techniques; color transforms, gradients and perspective transforms
- Implemented a detection algorithm using a sliding window and search technique
- Utilized a tracking class for each lane line to record important line information

Route Planner - Developer — **Dec 2019**
Udacity, Austin, TX

- Implemented using A* Search algorithm to find the shortest path between two points on a map
- Utilized data structures - sets and dictionaries to avoid unnecessarily slow lookups
- Applied an admissible heuristic (straight line) to ensure the direct path to the goal is being considered.

Autonomous Ground Vehicle – Engineer & Developer — **Jul 2019 – Present**
Self-Starter, Austin, TX

- Built an autonomous ground vehicle using a prefabricated chassis
- Using sensor fusion to interface RPLIDAR and Pixy Cam with Raspberry PI Model B+ for object detection and localization
- Interfaced motor controllers with Arduino Mega to control speed through pulse width modulation
- Utilizing ROS to broadcast and receive data from sensors for decision making

Global Warranty Reporting – Lead — **Jun 2018 – Jul 2019**
General Motors, Austin, TX

- Manage data reporting needs for over 1000 end users for all vehicle warranty data in general motors
- Collaborated with business partners to design and implement report solutions to satisfy data needs
- Analysis and solve data discrepancies and drive to a solution all business partners agree on

Work Experience

Stock Options day trader — **Dec 2020 – Present**

Samsung Austin Semiconductor, Austin, TX — **Aug 2019 – Dec 2020**
Automation Engineer

- Lead engineer in charge of server upgrading, testing, validation and maintaining automation database infrastructure
- Create web dashboards and applications to monitor key automation performance metrics of high-volume manufacturing environment
- Develop complex ETL Oracle SQL queries, procedures, triggers and views to source sensor data from the FAB
- Lead projects related to improvements in database early warning detection system

General Motors, Austin, TX — **Jun 2016 –Jul 2019**
Software Developer

- Create automated batch scheduling jobs using CA Autosys
- Design custom reporting solutions using IBM Cognos 10.2
- Utilize complex SQL to validate, test, troubleshoot data and create oracle database tables
- Develop ETL code using IBM Infosphere DataStage 10 and 11

Skills

Python, C++, SQL, AutoCAD, Fusion 360, Databases (Oracle 10g -19c, SQL Server 2002), ROS, MATLAB, Linux, Unix, Jira, Confluence, TensorFlow, Anaconda, OpenCV, GitHub

Additional Links

GitHub Pages: https://allegranicp.github.io **LinkedIn:** https://www.linkedin.com/in/allegra-nichols-0b1252127/