JEREMY SHANNON

jeremyeshannon@gmail.com (405) 659-2604 JeremyShannon.com
linkedin.com/in/jeremyeshannon github.com/jeremy-shannon

SKILLS

- *Autonomous Vehicles*
- *Artificial Intelligence*
- *Robotics | Controls | Perception*
- *Object Detection and Tracking*
- *Kalman Filters | EKF | UKF*
- *Particle Filters*
- *Sensor Fusion*
- *Localization*
- *ROS*
- *LiDAR | Point Clouds | PCL*
- *Control Theory | PID | MPC*
- *Machine/Deep Learning*
- *Neural Networks*
- *TensorFlow | Keras*
- *Computer Vision | OpenCV*
- *Python | Conda*
- *Jupyter*
- *C | C++ | C#*
- *Git | GitHub*
- *Linux | Bash*
- *OS X | Windows*
- *HTML5 | CSS3 | JavaScript*
- *.NET Framework*

EDUCATION

Udacity Nanodegree
SELF-DRIVING CAR ENGINEER
Online, est. completion Fall 2017

Master's Degree
ELECTRICAL AND COMPUTER ENGINEERING
University of Oklahoma, May 2014

Bachelor's Degree
COMPUTER ENGINEERING
University of Oklahoma, December 2001

OBJECTIVE STATEMENT

I'm eager to contribute to the next revolution in mobility and what might be the most profoundly impactful technological advancement since the Internet: self-driving cars. With 13 years of experience in software development and maintenance and 10 years in automated electronics testing, as well as team leadership and project/program management experience, and demonstrable communication skills, I have much to offer and embrace the challenge in pivoting my career toward artificial intelligence and robotics. I feel that my passion and curiosity for self-driving cars and machine learning, not to mention my background in electronics and pending Self-Driving Car Engineer Nanodegree from Udacity, make me eminently qualified for a career in autonomous vehicles.

PROJECTS

Behavioral Cloning
- Utilized Keras deep learning framework and OpenCV computer vision framework in Python to train a car to drive in a simulator.
- Achieved full performance in the training environment, as well as a previously unseen environment, through intricate data selection/augmentation strategy and neural network tuning.
- **JeremyShannon.com/2017/02/10/udacity-sdcnd-behavioral-cloning.html**

Traffic Sign Classification
- Utilized TensorFlow deep learning framework and OpenCV in Python to train a classifier for the GTSRB traffic sign dataset.
- Implemented data augmentation and image jitter to achieve 95.6% accuracy on hold-out test data set.
- **JeremyShannon.com/2017/01/13/udacity-sdcnd-traffic-sign-classifier.html**

Advanced Lane-Finding
- Utilized OpenCV in Python Jupyter notebook to create a robust image processing pipeline for detecting, recognizing, and identifying the current highway lane in an image or video.
- Additionally calculates car position within lane and lane radius of curvature based on coefficients of polynomial fit.
- Achieved lane recognition across all frames of a fifty-second vehicle dash cam video.
- **JeremyShannon.com/2017/03/03/udacity-sdcnd-advanced-lane-finding.html**

WORK EXPERIENCE

2002 – PRESENT: USAF, TINKER AIR FORCE BASE, OK

FEB 2015 *to* PRESENT

Computer Scientist - Business Software Applications Development
- Develop and maintain business software applications utilizing .NET Framework, resulting in improved organizational efficiency and effectiveness.
- Cultivated proficiency in C#, Visual Studio, SQL Server and SQL Server Management Studio, Entity Framework, Visual Studio Tools for Office (VSTO), Windows Forms, Team Foundation Server, ASP.NET MVC, and HTML/CSS/JavaScript.
- Assumed role of team leader over five engineers and eight new and ongoing projects, performing concept formation, tracking, cost and schedule estimation, and other administrative duties in Agile/Scrum process.

JAN 2002 *to* FEB 2015

Electronics Engineer – Automated Test Software Maintenance and Development
- Maintained software for automated testing of analog and digital electronics, resulting in improved and extended avionics repair capability and reduced cost.
- Analyzed and troubleshot complex electronic circuits and procedural programs written in test-specific ATLAS language, and embraced other challenging special projects utilizing Microsoft Visual Basic for Applications (VBA), ANSI C, Linux, etc.
- Assumed roles of technical expert for a team of five engineers, project manager for that same team, and technical coordinator for a $6M hardware and software development program encompassing over 20 projects - these roles required strong technical writing, communication, and time management skills.