Bhooshan Deshpande

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Objective : **To gain industrial experience in a self-driving car company through Internship/Co-op opportunities.**

Education and Training

- **MS in Automotive Engineering** (GPA – 3.6/4) *Aug 2019 – Present*
  Clemson University – International Center for Automotive Research , US
- **BS in Mechanical Engineering** (GPA – 3.8/4) *Aug 2013- Aug 2017*
  PVG college of Engineering and Technology, Pune University, India

Relevant Coursework

- **High Performance Computing**
- **Automotive Electronics**
- **Motion Planning**
- **Autonomous Driving Technologies**
- **Autonomy Sciences and Systems**
- **Scaled Autonomous Vehicles**
- **Systems Engineering**

Work Experience

- **Graduate Research Student** *(Clemson University – Automotive Engineering Dept. , US)* *Oct 2019 – Present*
  - Working on **sensor hardware integration** of an industrial robot project funded by NSF
  - **Implementing 3D SLAM algorithm** using a sensor suite
  - **Integration of Motion planning algorithm** to develop an autonomous robot arm
- **Graduate Engineer Trainee** *(Varroc Engineering Ltd., India)* *July 2017 – June 2018*
  - Development of CATIA macros to reduce mechanical design time (**reduced design time by 50% in given design tasks**)
  - CAD modelling for KTM Motorcycles (**development of head and tail lamps**)
- **Shop-Floor Intern** *(Thyssenkrupp India Pvt. Ltd.)* *June 2016 – July 2016*
  - Maintenance and Repair Project of a six-stage gearbox and a center lathe

Academic Projects

- **Lane keeping Assist and Adaptive Cruise Control on an RC car using PID control** *Oct 2019 -Dec 2019*
- **Implementation of RRT* for Autonomous Parking Navigation in MATLAB** *Oct 2019 -Dec 2019*
- **Development of a complete BEV model using MATLAB/Simulink to maximize the profit model** *Nov 2019-Dec 2019*
- **Vehicle control using CARLA software (using Pure Pursuit and MPC controller)** *Mar 2019- May 2019*
- **Behaviour cloning using Deep Learning techniques** *Dec 2018- Mar 2019*
- **Image Recognition using Machine Learning** *Jan 2018 – Jun 2018*
- **Bachelor's Final Project : Mathematical modelling and simulation and of a flexible beam** *Jul 2016 - Jun 2017*
- **Development of Electric Buggy in SAE- E-BAJA competition (National Rank – 10)** *Jul 2016 - Jun 2017*
- **Development of Electric Motorcycle in TechWizards,India competition (National Rank–1)** *Jul 2015 - Jun 2016*

Skills

- Computer Skills
  - **Python ,C++ , ROS, MATLAB, Simulink, CATIA , NX**
  - Worked with TensorFlow, OpenCV libraries, multiple ROS packages
  - Slam Algorithms using 3D LIDARS and Depth Cameras, A* and RRT* algorithms
- Language Skills : English, German(Goethe Standard :B2**)** , Hindi
- Team Management Skills :
  - **Team Captain for Vehicle Development Project in Undergrad (E-Baja and E-Motorcycle)**
  - Conducted Social Events at an NGO for 2 years (Core Team Member)

Certifications

- ROS Programming by Delft University (EdX) *Sep 2019 – Present*
- Self-Driving Car Specialization (Coursera) *Oct 2018 – Present*
- Complete Self Driving Car Course on Udemy (Applied Deep Learning) *Jan 2019 – Jun 2019*
- Complete Python Boot-camp (Udemy) *Dec 2018 – Mar 2019*
- Machine Learning by Stanford University (Coursera) *Jan 2018 – Jun 2018*

Volunteering Experiences

- Core committee member at **The Ecstasy Hub** – Present Engagement of 1.5 years *April 2018 – Present*
  - Working for enhancing the kindergarten education experience of below poverty children
  - Contributed in many environmental causes – tree plantations, river-cleanups, etc. in India