VRUSHABH DESAI

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AREA OF INTEREST

Artificial Intelligence, Machine Learning, Autonomous Robotics, Control System, Embedded System, and Automobile Electronics.

EDUCATION

Dwarkadas J. Sanghvi College of Engineering, Mumbai, India (*August 2014 – June 2018)*
Bachelor of Engineering in Electronics Engineering **CGPA: 8.7/10**

SKILLS

- **Programing Language:** C, C++, LUA, Python and HTML5.
- **Software Proficiency**: LTspice, Eagle, MATLAB, Atmel Studios, SolidWorks, LabVIEW, Keil Micro Vision, and FluidSIM.
- **Soft Skills:** Leadership, Patience, Teamwork, Flexibility and Adaptability.

WORK EXPERIENCE

Grushie Energy Private Limited **(***June 2018 – June 2019)*
(Electronic Design Engineer) *Mumbai, India*

- Joined as a Research and Development Intern, designed complete wiring harness for the Electric Motor Bike.
- Developed an Electronic Control Unit (ECU) which has CAN capability, which controls various on-board system.
- Developed a Level-2 Electric Smart charger along with new technology, Li-Key (Light-key) which helps customers completing their payments from their online wallet without an active internet connection. As a *Head of Signal Processing and Control Algorithms Team,* my aim is to develop an efficient control module and optimized algorithms for Electric Delivery Robot.

KP Footwear *(June 2016 – August 2016)*
(Business Development Intern) *Mumbai, India*

- Monitored sales and manufacturing of the company using customized software which was based on Machine Learning and AI.
- Analyzed the profit and loss of the company on a weekly bases and created weekly reports, which helped me understand how Machine Learning and AI work. It helped me to gain exposure in the field of data analysis as well.

ACADEMIC PROJECTS

DJS Racing *(March 2016 – May 2018)*

- DJS Racing is a Formula Student team of D. J. Sanghvi College of Engineering. As an Electronics and Data Acquisition Lead, developed an industrial-grade Electrical Wiring Loom with Spark Minda.
- Designed a Telemetry system which collects data from various sensors such as wheel speed sensor, brake pressure sensor, tier temperature sensor, shock potentiometer, and air pressure sensor, etc. on the car and use that data to improvise its performance.

Autonomous Robotic Arm *(June 2017 - March 2018)*

- Designed the entire CAD model on SolidWorks and performed various Stress and Strain analysis to decide the material for Arm.
- It was based on Supervised Learning and used LabVIEW as a backbone for programming.

Gesture Control Robotic Arm (*January 2017 - April 2017)*

- Designed custom embedded board using EDA tool like Eagle, which gets the data from an inertia sensor (MPU 6050) on the user's hand and accordingly controls a SCARA based pick and places robotic arm.

Electromagnetic Pulse Generator **(***August 2016 - October 2016)*

- Circuit simulation tools like LTspice help me understand the circuit passive components characteristic.
- Successfully generated 150V surge as an output voltage using Capacitors as an energy storage bank.

ADDITIONAL COURSES

- Certified Course in Robotics: Mobility by the University of Pennsylvania, taught by Prof. Daniel E. Koditschek on Coursera.
- Modern Robotics Course 1 by Northwestern University, taught by Prof. Kevin Lynch on Coursera
- MATLAB Programing by Vanderbilt University, taught by Prof. Mike Fitzpatrick on Coursera.
- Certified Course in Machine Learning by Prof. Kirill Eremenko on Udemy.
- Certified Course in Mastering Microcontroller by FastBit Embedded Brain Academy on Udemy.
- Certified Course in programing language like Python by Prof. Jose Portilla on Udemy.
- Certified Course in Introduction to CAN Bus Technology by Prof. Emile Ackbarali on Udemy.

ACHIEVEMENTS

- Won consecutive award for *Best Designed Formula Student Car Award* at Formula Bharat, India in 2017 and 2018.
- Was *Second Best Asian Team and Best Indian Team* at Formula Student Germany 2017 held in Hockenheimring, Germany.
- Won Static Event (Cost) at Formula Student Austria held in July 2018 at Red Bull Ring, Austria.