

KASHISH GOYAL

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EDUCATION

Northwestern University, Evanston, IL

Master of Science in Mechanical Engineering, Specializing in Robotics and Control

Anticipated Dec, 2018

Thapar University, Punjab, India

Bachelor of Engineering in Mechanical Engineering, GPA: 8.83/10.00

Jun, 2015

SKILLS

- ROS (Robot Operating System), V-Rep, OpenCV, VSLAM, Gazebo, Mathematica, Simulink (MATLAB)
- Arduino, PIC32
- Python, C, Markdown, Git, HTML5/CSS, JavaScript
- PTC Pro- Engineer/ Creo Elements, DDS SolidWorks, AutoCAD, KeyShot, CorelDraw

ACADEMIC PROJECTS

Aerial Crop Dusting with Fixed Wing AV, Northwestern University, IL

Apr, 2018 - Present

- Navigation of AV in outdoor environment using GPS waypoints
- Fusing data from visual odometry, IMU and GPS for precise localization
- Generating semi dense point cloud from stereo camera setup

Brushed DC motor control, Northwestern University, IL

Mar, 2018

- Programmed PIC32 microcontroller for motor control circuit - C programming
- Used simultaneous control loops (using interrupt sequences) for current and position control
- Interfaced with Matlab using serial communication over UART

Starbax, Northwestern University, IL

Nov, 2017 - Dec, 2017

- Created a ROS package to use Baxter arm for making coffee
- Used color and AR tags to detect the poses of cups and Keurig followed by calculating movement using inverse kinematics while satisfying constraints - all scripts written in Python

Mecanum Wheel Application for Industrial Forklifts, Thapar University, India

Jan, 2015 - May, 2015

- Created customized design for industrial application (in SolidWorks) with in-house manufacturing of the entire vehicle
- Added worm drive to eliminate necessity of a braking system
- Won the Best Project Award, leading a team of five

WORK EXPERIENCE

VE Commercial Vehicles Ltd. (A joint venture company between The Volvo group and Eicher Motors Ltd.)

Deputy Manager
2017

Jun, 2015 – Mar,

- Supported strategy development for enhancing Brand parameters such as Advocacy, Positioning and Perception, initiated
- Planned and conducted activities for improving market penetration through adding and sustaining corporate connections
- Supervised field demo trials and product validations for Heavy Duty Truck segment throughout various construction and mining sites in India

INTERNSHIP

Eicher Tractors Ltd. (A subsidiary of TAFE Motors and Tractors Ltd.)

Jan, 2014 – Jun, 2014

Reduction of Defects in Post-painting Area through Process Study and Improvements

- Won "Best Kaizen Award" for pioneering device for diesel fuel system priming, saving INR 6 Lacs annually
- Designed and implemented sling belt-based tackles for vehicle hood transport, adding safe and quick operation
- Reduced defect in Parts per Million (PPM from 290000 to 160000 within a period of three months and Defects per Unit (DPU) (at final stage) reduced from 0.5 to 0.25
- Controlled excessive tube rejections in Tire Sub-Assembly Area through root cause analysis and implementation of relevant solution

ADDITIONAL DETAILS

Leadership roles/Memberships

- Joint Secretary of Society of Mechanical Engineers at Thapar University, India 2014 – 2015
- Executive member of Robotics Society at Thapar University, India 2012 – 2013

Extra-Curricular Activities

- Aero-modeler (designing, fabricating and flying model aircrafts)
- Intermediate guitar player, Badminton and Table Tennis enthusiast