DEVESH DATWANI

ROBOTICS **ENGINEER**
WORCESTER, MA

OBJECTIVE

Seeking for full time co-op positions in the space of computer vision and/or robot perception

SKILLS

LANGUAGES
Python 3+ ● MATLAB ● C/C++

SOFTWARE STACK
ROS 1 & 2 ● Git ● OpenCV ● TensorFlow
Numpy Keras ● AWS ● Django & Flask
Linux SolidWorks ● AutoCad

HARDWARE STACK
Arduino Uno ● Raspberry Pi 3 B

EDUCATION

MS IN ROBOTICS ENGINEERING
WORCESTER POLYTECHNIC INSTITUTE
WORCESTER, MA | AUG 2021 - MAY 2023

KEY COURSES:: Machine Learning ● Robot Control ● Computer Vision ● Artificial Intelligence ● AI For Autonomous Vehicles Robot Dynamics

BE IN MECHANICAL ENGINEERING
APSIT MUMBAI UNIVERSITY
MUMBAI, INDIA | AUG 2014 - MAY 2018

NOTABLE ACHIEVEMENT: Received the "Young Innovator" award for research on Plasma Actuators at the ICASTe conference

CERTIFICATION

Python Programming ● Robotics: Aerial Vehicles ● Applied Machine Learning
Introduction To Self Driving Cars
Deep Learning Specialization

LINKS

https://github.com/deveshdatwani
http://www.linkedin.com/in/deveshdatwani
http://www.deveshdatwani.com/

CONTACT

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RELEVANT EXPERIENCE

SPACE GOAT | DESIGN & PERCEPTION ENGINEER
SEP 2021 - JAN 2022 | WORCESTER, MA

- Competed at the NASA Extreme Terrain Challenge 2022 to build a Mars rover while representing WPI
- Actively contributed in the design of a rover that tackles the challenges of traversing the Martian surface
- Integrated sensors with the rover and contributed to the firmware code for rover-environment perception

PROGRAMMING EXPERIENCE

NURTURELABS | JUNIOR WEB DEVELOPER INTERN
MAY 2021 - JUL 2021 | REMOTE

- Worked in the back-end development team to build an on-demand web application for users to generate business leads
- Merged the FastAPI and Django frameworks to build a quick and reliable web application hosted on Amazon's Web Services
- Wrote Pythonic scripts to automate data scraping from 52+ million users on Reddit, StackOverflow and ProductHunt

RESEARCH PROJECT

AIRFLOW INDUCTION WITH PLASMA ACTUATORS [DOC]
2017 - 2018 | ASPIT, MUMBAI UNIVERSITY

- Designed and led a research project on plasma actuators to induce air flow without the use of any moving elements
- Designed and fabricated a plasma actuator inside hollow pipes powered by a high voltage-high frequency transformer
- Observed & recorded wall-bounded jet air flow of ~ 9000 liters/hr during experiments at the aerospace department of IIT, Bombay

ENGINEERING PROJECTS

HUMAN POSE ESTIMATION WITH CNN [GITHUB]
MAR 2022 - MAY 2022 | WORCESTER POLYTECHNIC INSTITUTE

- Implemented the DeepPose paper to build a convolution neural network for estimating human-body pose in 2 dimensions
- Created a TensorFlow pipeline to fetch and load the FLIC dataset and train an AlexNet on a Google Colab notebook
- Recorded mean squared error values of ~ 400

TRAFFIC SIGN DETECTION WITH MASK R-CNN [GITHUB]
SEP 2021 - DEC 2021 | WORCESTER POLYTECHNIC INSTITUTE

- Implemented adaptations to the Mask R-CNN network to enhance its performance in detecting traffic signs
- Augmented a dataset of 10,000+ traffic sign images (motion blur and condensation) to improve model performance
- Helped enhance mAP value of the r-cnn model from 0.05 to 0.25

AERIAL VEHICLE DESIGN [DOC]
2011 - 2020 | MUMBAI, INDIA

- Designed, fabricated and flight-tested remotely operated fixed-wing planes and quad copters
- Experimented with different power-plant, wing, composite material and electronic configurations
- Gained hands on experience with aerodynamics, electronics and fabrication involved in aerial vehicle design after 200+ flights