Pushyami Shandilya

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SUMMARY

Graduate student specializing in machine learning and control theory applications. My interests include computer vision, NLP, deep learning, optimisation/optimal control.

EDUCATION

GEORGIA TECH
MS in Electrical and Computer Engineering
Expected May 2018 | Atlanta, GA
Cum. GPA: 3.63 / 4.0

PESIT
BE in Electrical and Electronics Engineering
May 2016 | Bengaluru, India
College of Engineering
Dean's List (All Semesters)
Cum. GPA: 9.11 / 10.0
Recipient of M. R. Doreswamy Scholarship for Academic Excellence

SKILLS

Programming
Python • C • C++
Tools and Platforms
MATLAB • MultiSIM • Tensorflow • Keras • Caffe • OpenCV • OpenGL

LINKS

Github:// **push-95**
LinkedIn:// **pushyami**

COURSEWORK

Statistical Machine Learning
Statistical Techniques in Robotics
Optimal Control
Advanced Digital Signal Processing
Digital Image Processing
Advanced Programming Techniques
Probabilistic Graphical Model
Speech Signal Processing
Principles of Management
Fuzzy Logic and Intelligent Systems
Control Theory
Embedded System Design

EXPERIENCE

NVIDIA | Deep Learning Software Intern
Aug 2017 – Dec 2017 | Santa Clara, CA

- Worked with the AI Copilot (Drive IX) team, mainly on the data engineering aspect for preparing/procuring relevant data for training neural networks.
- Involved in the bringup of various sensors and consequently developed a server-client system for data collection with an array of cameras.
- Used the DrivePX2 platform for interfacing with GMSL cameras to stream and capture from multiple sensors.
- Miscellaneous work on data augmentation, data generation and image processing on raw data.

PANASONIC AUTOMOTIVE | Computer Vision Intern
May 2017 – Aug 2017 | Atlanta, GA

- Worked on an integrated Driver Monitoring System (DMS) solution that detects crucial functions of the person during driving.
- Responsible for deployment of the Infrared camera in test car and collection of relevant data to be fed to the computer vision based algorithm.
- Added key features to the product User Interface using Qt Creator.
- Developed methods for analysis and evaluation of real-time driver data.

ACADEMICS

GRADUATE TEACHING ASSISTANT Machine Learning (CS4641) | Georgia Tech
Teaching Assistant for undergraduate Machine Learning- responsibilities including providing assistance to students on machine learning concepts and grading.

AUTOMATED VISUAL TRACKING CARM Lab | Georgia Tech
Worked on the reconstruction of 3D solid models from point cloud data. Also involved robot path planning following geometrically defined surfaces including constraints.

Q-LEARNING FOR BIPED WALKING ROBOT
Used reinforcement learning techniques to produce self-modelling frameworks for a biped robot for autonomous walking - used simulated environments provided by the OpenAI toolkit.

AUTOMATIC COLORISATION OF GRAYSCALE IMAGES
Color grayscale images using color map from a similar image to produce aesthetically-believable color image using machine learning/deep learning techniques such as Support Vector Machines (SVM) and Convolutional Neural Networks (CNN).

TRAFFIC SIGN DETECTION
Graph-based ranking to detect traffic signals, with saliency measure of images for accurate prediction despite variations in illumination and/or background occlusion.

OTHER PROJECTS

Robot Localization Using Particle Filtering
Land Use Data Classification
Web application to calculate Geodesic Distance
Online Learning to Classify Sensor Data
Universal Smart Adapter
Lock-In: Integrated Safe
Fault-tolerant subsystem for nano-satellite PiSAT
Remote-Controlled Plane