Curriculum vitae

PERSONAL INFORMATION

Anand Dubey

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Github https://github.com/ananddb90

Date of birth 01-12-1990 | Nationality Indian

WORK EXPERIENCE

March 2017 – Present

Thesis in Deep Learning and Computer Vision

Continental Automotive, Frankfurt (Germany)

Study and development of different compression technique for deep neural network used in computer vision tasks

- Frameworks : caffe/tensorflow frameworks
- Detection Network : RFCN, SSD, Faster RCNN
- Contribution : Bayessian Knowledge Distillation, Detection Model Uncertainty and Structured Sparsity in CNNs
- Architecture : ResNet, VGG, SqueezeNet, MobileNet, U-Net
- Hardware : GeForce GTX TITAN X, Nvidia DrivePX2
- Dependencies: Python, OpenCV, cuDNN, CUDA

July 2017 – Present

Self-Driving Car Engineer

Nanodegree program Udacity Online Course

- Computer Vision and Deep Learning : Tensorflow, Deep Neural Networks, Convolutional Neural Networks, Transfer learning
- Lane Detection : Hough transforms, Canny edge detection, OpenCV, curved road with different surfaces and lighting, camera calibration, image transforms and polynomial fits.
- Traffic Sign Classification : train/test/validation sets, regularization (dropout) and data augmentation techniques.
- Behavioural Cloning : deep neural network training to drive a car in a simulator, data collection and cloning it on test track
- Vehicle Tracking : image classifiers (SVM, Decision trees, DNN, HOG), data fusion

Sept 2016 – Feb 2017

Internship on Advance Driver Assistance System

IAV GmbH, Chemnitz (Germany)

Study and development of Stop and Go Longitudinal Controller for Autonomous Driving

- Development Tools : Matlab (Simulink, stateflow, m-scripts), dSpace (target link)
- Simulation tools : CarMaker (adapt vehicle dynamics and simulate test environment)
- Contribution : Vehicle platooning using for connected multi-agent system
- Software : Cascaded Distance-Velocity controller

July 2012 – Sept 2015

Software Developer

Continental Automotive Components Pvt Ltd, Bangalore (India)

AUTOSAR Software Application : Model Based Development

- MATLAB Sensor Model : Implementation of Voltage and Current model for switching the HALL Sensor, Linear Sensor, Motor Driver, System Basic Chip (SBC).
- Software and system integration testing which includes micro-controller emulation, CPU/bus load, CPU life, EEPROM block and task scheduling
- m-Scripting for Model-In-Loop (MIL) framework development

Non-AUTOSAR Software Application : Embedded C Development

- CAN Network Management and Configuration of CAN messages, EEPROM blocks for PASE

EDUCATION AND TRAINING

Oct 2015 – Present

Master of Science in Automotive Software Engineering

Grade 2.1*

Technische Universität Chemnitz, Chemnitz (Germany)

Major Subjects :

- Machine learning, Computer vision
- Multi-core programming, Parallel programming and Swarm Robotics
- Automotive Software Engineering (ECU and CAN-Bus programming)

Academic projects :

- Pattern recognition : Using Neural networks, Support vector machines, Deep learning, Recurrent neural network
- Computer vision : Image processing, Geometric transformation, Feature detection and matching, Segmentation

June 2008 – June 2012

B.Tech in Electronics and Communication Engineering

Grade 75%

Jaypee Institute of Information Technology, Noida (India)

Major Subjects :

- Micro-controller & applications, Control systems
- Programming in C, Embedded systems

Projects :

- Vehicle number plate detection using image processing
- IEEE certificate for circuit designing and fabrication

PERSONAL SKILLS

Computer skills

- Programming Language : Python, m-script, C, C++
- Parallel Programming : OpenMP, P-thread
- Operating systems : Linux, Windows
- Frameworks : Caffe, Tensorflow
- Protocols : CAN, UDS, Autosar
- Detection Architecture : Faster RCNN, RFCN, SSD, YOLO, FCN, SegNet
- Detection Architecture : AlexNet, VGG16, Inception, ResNet, SqueezeNet, MobileNet, DenseNet, U-Net
- Tools : Matlab (Simulink and Stateflow), dSpace-targetlink, CANoe, iSystem, Eclipse, Ultra-debugger, WinIdea, DOORS, MKS, Ideas, CarMaker, Git

Language skills

- English (Fluent), Deutsch (Intermediate), Hindi (Mother tongue)

Frankfurt,
November 21, 2017