Ankur Roy Chowdhury

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EDUCATION

TEXAS A&M UNIVERSITY
MS in Computer Science
May 2019 | College Station, TX
GPA: 3.9 / 4.0

GGSIP UNIVERSITY
B.Tech in Computer Science & Engineering
May 2015 | New Delhi, INDIA
GPA: 3.8 / 4.0

LINKS

Github:// **ankur-rc**
LinkedIn:// **ankur-roy-chowdhury**
Twitter:// **@ankur_rc**
Stackoverflow:// **ankurrc**

COURSEWORK

Computational Photography
Machine Learning
Reinforcement Learning
Deep Learning & Applications
Artificial Intelligence
Information Retrieval
Speech Processing
Algorithms: Analysis & Design
Advanced Computer Architecture

SKILLS

Programming
Python • C++ • Java

Machine Learning
Sci-kit • Tensorflow • Keras • Caffe*

Numerical Solving
Numpy • Scipy • Eigen* • Ceres

Computer Vision
OpenCV • PCL • Open3D* • dlib

Robotics
ROS • Gazebo • Carla Simulator

Web Stack & IoT
Spring • Kafka • MQTT • AngularJS

*familiar

RESEARCH

TEXAS A&M ENGINEERING EXPERIMENT STATION
Robotics Researcher
Sept 2018 – Present | College Station, TX

Vehicle Control from Visual Space

- (Ongoing) Working on making a Polaris GEM e6 drive autonomously by controlling it directly from visual space.
- Developed a Segmentation Network to estimate drivable area using a *SqueezeNet* backbone.

Control Transfer-learning from Drone to Ground Vehicle

- Evaluated the *Dronet* network for autonomously driving a golfcart.
- Augmented the network using *activation maps* to analyse the predictions.

Perception on Stereo-camera

- Worked with *Perceptin Dragonfly* computer vision module - a Jetson TX1 powered multi-stereo camera setup.

PROJECTS

Structure from Motion

- Developed a basic structure-from-motion framework.
- Used OpenCV for performing pairwise motion estimation and triangulation.
- Used Ceres for performing bundle-adjustment.
  [**code**]

Vehicle Control using Deep Reinforcement Learning

- Used an actor-critic algorithm - DDPG, to train a deep network that enabled a vehicle to follow lanes. The training was performed using Keras on the Carla simulator. [**code**][**report**]

UAV path planning using Local Hill Climbing

- Used a meta-heuristic algorithm to plan a path for wilderness search-and-rescue operation. [**code**][**video**]

More projects can be found at ***ankur-rc.github.io***.

EXPERIENCE

DMI, INC. | Software Engineer - Internet of Things
July 2015 - July 2017 | Haryana, INDIA

- Worked on developing an IoT analytics platform from scratch, based on the Cloudera stack.

SOFTURA | Software Engineering Intern - Computer Vision
May 2018 - Aug 2018 | Farmington Hills, MI

- Developed a POC for a face-recognition based authentication system.
- Conducted thorough analysis of various algorithms using scikit-learn and dlib.
- Solution based on *Deep Metric learning*, a *One Shot learning* method.

Authorized to work in the US through the OPT program.