

Yash Chandak

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Education

2017–current **MS/PhD, Computer Science**, *University of Massachusetts*, Amherst, US.
2013–17 **B.Tech, Computer Science & Engineering**, *VIT University*, Chennai, India, **9.11/10.**

Research Experience

current **Skill discovery over large action space for continual learning**
University of Massachusetts, Amherst, research project under **Dr. Philip Thomas**
Working on dynamically expanding the set of useful skills to learn new tasks faster.

Jan–Jun '17 **Convolution Neural Networks with Attention for Unstructured Graph Classification**
Indian Institute of Technology Madras, research project under **Dr. Balaraman Ravindran**
Learning node embeddings via context dependent kernels for neighborhood aggregation.

Jun–Jul '16 **Semantic Graph based Image Retrieval**
University of Technology Troyes, France, research internship under Prof. Babiga Birregah
Extracting entity co-location graph from images for retrieving similar images using graph matching.

Feb–Mar '16 **Target Detection for Autonomous Weapons**
Defence Research & Development Organisation, research trainee under Sh. Jai Prakash Singh
War-time vehicle detection for Off-Route mines, using neural networks on Raspberry Pi.

Feb–May '15 **Optimizing Human-Machine Task Assignments** [AAAI HComp wip 2015]
The Aspiring Researchers Challenge under **Prof. James Davis, UCSC** and **Rajan Vaish, Stanford**
Judicious usage of crowd intelligence to increase the accuracy of computer vision algorithms.

Work Experience

Dec–Jan '16 **R2Robotics, Internship.**
Autonomous visual navigation of aerial drones by matching live camera feed with preloaded satellite images.

Jun–Sep '15 **Microsoft Campus Connect, On-campus mentored project.**
Developed module to convert non-IoT devices into IoT enabled and predict user settings from past usage.

Dec '14 **Uurmi Systems, Internship.**
Real-time day/night time lane detection for autonomous cars by exploiting structural properties of lane markers.

Related Academic Projects

- **Blind steganography obfuscation**
Using entropy based scrambling in spatial domain and additive Gaussian noise in Fourier Transform.
- **Vanishing Point detection in 2D image**
Depth estimation in individual images using point of convergence of major line segments.
- **Automated text generation using LSTMs**
Recurrent Neural Networks for text generation using Tensorflow and Python.
- **Human tracking mobile robot**
Arduino bot, controlled using offset of the detected face from the frame's center.

Technical Skills

Languages Python, C++, MATLAB, \LaTeX
Libraries OpenCV, Hadoop, Tensorflow, PyTorch
Platforms Linux, Windows, Arduino, Raspberry Pi

Extra-Curricular Activities

- **Junior National Basketball** player under Basketball Federation of India.
- Sketching, Mountaineering, rock-climbing, camping