Gaurav Gupta

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Research Interests

Deep learning, Computer vision, Reinforcement learning

Education

2014-Current	**Indian Institute of Technology (BHU), Varanasi** *Bachelor of Technology (Honors) in Computer science and engineering* **Current CPI: 9.32/10.0**

Work Experience

May '16–Aug '16	**CloudCV, Google Summer of Code** [GitHub] [IDE] Worked with CloudCV (Machine learning and perception lab, Virginia Tech) to develop an IDE for building deep learning models. The IDE provides a very simple drag and drop interface to create and configure DL model and support export / import of model configuration file for TensorFlow, Caffe and Keras.
Sep '15–Dec '15	**Full stack web developer, Medoboss healthcare pvt ltd** Developed core website, user sign-up form, user timeline, real time chat and other features using MEAN stack and AWS.

Projects

July '17	**Learning to count with RNNs** [Blog] Experimented with different models of recurrent neural networks for learning a simple task of counting and explained their limitations.
July '17	**Self driving car simulation** Trained a convolution neural network to predict the steering angle of the car using Udacity self driving car simulator.
Jan '17–Apr '17	**Using word embeddings for temporal relation classification** [GitHub] *Advisor: Prof R. B. Mishra* Created a dataset of event ids and their word embeddings for events in TimeBank1.2. Trained a logistic regression classifier on TimeBank-Dense for classifying the temporal relation between two events.
Dec '16–Feb '17	**Grasping of moving objects with DeepRL** [Video] Created a game environment implementing a 4 DOF robotic arm. Trained the agent using deep reinforcement learning to capture moving objects. Used recurrent neural networks to capture long term dependencies and human supervised training for faster convergence.
Miscellaneous [GitHub]	**Automatic AC remote** Android app to automatically start & stop the air conditioner using IR blaster of a smartphone. It intelligently maintain the room temperature based on current weather thereby increasing comfort and reducing electricity cost. **SecureTM API** Fast and secure way for developers to implement mobile number verification functionality using OTP on their websites for better authentication of users. **Memento** [Playstore] AI assistant for human memory. It creates an artificial memory of conversations, people and places which can be queried later in case the user forgets something.

Skills

Languages	Python, JavaScript, C, C++, HTML, CSS
Technologies	TensorFlow, Caffe, Keras, Unix, Mean stack, Android, LaTeX

Courses

Online	CS231n: Convolutional Neural Networks for Visual Recognition (Stanford) [Assignments]
	MIT 6.S094: Deep Learning for Self-Driving Cars
Regular	Computer Vision, Artificial Intelligence, Intelligent Computing, Computer Graphics, Computer System Organisation, Data Structures, Algorithms.

Awards & Recognition

Winner of Microsoft Code.Fun.Do oncampus hackathon 2017.

National finalist in Microsoft Imagine Cup India 2016.

Second runner up in RoboHunt 15, IIT BHU.

Awarded *A** grade in Computer System Organisation, Computer Architecture, Biology, Physics-I.

Qualified regionals to reach Indian National Mathematics Olympiad 2013, Indian National Physics Olympiad 2014.