Shubham Chandel
Computer Science Graduate

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Education

- **Courant, New York University**   Manhattan, NY
  Master of Science in Computer Science   *Sept 2018 – Present*

- **Indian Institute of Technology**   Mandi, IN
  Bachelors of Technology in Computer Science; GPA: 8.6/10   *Aug 2013 – June 2017*

Experience

- **The Solar Labs** *Research Internship*   *June 2018 – Aug 2018*
  - **Solar Neural Architecture Search**: Used a recurrent neural network to automate the design of solar architectures and train the network with reinforcement learning to maximize the expected power generation.

- **Amazon.com** *Software Development Engineer*   *July 2017 – June 2018*
  - **Unsupervised Keyphrase Extraction**: Research and prototype for *Read reviews that mention* feature on Amazon using unsupervised natural language processing.
  - **Potential Sellers Discovery**: Identify high impact seller to onboard on Amazon. Developed and maintained, code and infrastructure on AWS EMR, Lambda and EC2 clusters.
  - **Product Page Classifier**: Design and implementation of a classifier to identify given any webpage is a product page or not by identifying structural semantics.

- **Udacity** *Reviewer and Mentor*   *Feb 2017 – July 2018*
  - **Student Mentor**: Mentor and code review students in Deep Learning and Self Driving-Car nanodegree.

- **Indian Institute of Technology** *Research and Teaching Assistant*   *Feb 2017 – June 2017*
  - **Research Assistant - Machine Learning**: Research on using multiple generators and discriminators to speed-up the generation process of generative adversarial networks (GAN). Multiple discriminators with varying architecture provided empirical speedup during training time.
  - **Teaching Assistant - Deep Learning**: Taught concepts of Deep Learning to undergrads and Ph.D. students. Taught classroom session explaining Google's FaceNet and Pix2Pix architecture, demonstrating the caveats involved in training, setting up cloud GPU and different deep learning library paradigms.

- **Flipkart Research** *Research Internship*   *June 2016 – Aug 2016*
  - **Product Return Analysis**: Given user return reviews, extracted best set of return reason per category, identified incorrectly annotated returns and predicted correct reason for return. Used Word2Vec for feature representation, RAKE for keyword extraction, DBSCAN for vector clustering.

Projects

- **PyTorch Summary**: Open source python library for model summary in PyTorch similar to *model.summary*() in Keras. Over 500+ stars on GitHub. *https://github.com/sksq96/pytorch-summary*
- **World Models**: Implementation of model based reinforcement learning based on David Ha's *World Models*. Trained in an unsupervised manner to learn a compressed latent representation of the environment.
- **Face Detection and Recognition**: Detection and recognition of human faces in the context of classrooms and meetings. Used for the purpose of automating the attendance process. Haar Cascades features for detection, Google's FaceNet for embedding and recognition, DBSCAN for headcount.
- **File Tone Transfer Protocol**: Used audio waves to transfer text files between different machines within ear-shot distance.

Awards

- **Amazon Machine Learning Hackathon**: Secured 1st prize among 70 teams participating across India in Nov 2017.
- **AngelHack Hackathon**: Secured 1st runner-up at AngelHack Bangalore held in June 2016.
- **IIT Joint Entrance Exam**: Was in top 1 percentile of total around 1,500,000 candidates.

Languages and Frameworks

Python, JAVA, C++, JavaScript, LaTeX, TensorFlow, PyTorch

Selected Coursework

Machine Learning, Deep Learning, Computer Vision, Reinforcement Learning, Natural Language Processing