

Vaibhav Gupta

Mobile: 646-645-6284 | Email: vvg239@nyu.edu | Website: vaibhavgupta.io | GitHub: guptv93

EDUCATION

- Courant, New York University** New York, USA
Master of Science in Computer Science; GPA: 3.97/4 *Sep. 2018 – May 2020*
- Dhirubhai Ambani Institute of Information and Communication Technology** Gujarat, INDIA
Bachelors of Technology in Computer Science; GPA: 8.0/10 *Aug. 2010 – June 2014*

EXPERIENCE

- Human and Machine Learning Lab, NYU** New York, USA
Assistant Research Scientist *Sep. 2019 – Present*
- Working with Professor Brenden Lake and his team, with the aim of using Machine Learning and Deep Learning techniques to model how learning takes place in humans. [lake-lab.github.io/people](https://github.com/lake-lab/people)
 - Have gained significant experience in training and analysing large-scale self-supervised models for computer vision tasks.
- Grab Technologies** Washington, USA
Senior Software Developer *July 2020 – Present*
- Currently building the next generation A/B Testing and Data Analytics Platform to get customer insights.
 - Previously interned with the Ads Team. Built an internal portal where marketers could create campaigns for automatic propagation to multiple Ad Platforms.
- Amazon** Bangalore, INDIA
Software Development Engineer *July 2014 – August 2017*
- Worked on a website product end-to-end, from Frontend UI to Backend Services and data-stores.
 - Later worked with the Social Ads Team on Revenue Optimization and Big Data Analytics.

PAPERS

- Self-Supervised Learning through the Eyes of a Child** **Accepted at NeurIPS 2020**
- Utilized modern self-supervised deep learning methods and a recent longitudinal, egocentric video dataset recorded from the perspective of several young children, to model cognitive development in human babies.
 - ArXiv Link: [2007.16189](https://arxiv.org/abs/2007.16189) | Press Coverage - *NewScientist*, *DigitalTrends*

ACADEMIC PROJECTS

- BlackJack RL Agent and Cognitive Models** | github.com/guptv93/blackjack Feb 2019 – May 2019
- Developed the optimal strategy for BlackJack using SARSA and Q-Learning reinforcement learning techniques.
 - Used the optimal strategies (and a few other probabilistic heuristics) to model how humans make decisions during BlackJack. For this, actual human data was collected using an online BlackJack simulator.
- Static Prediction of GPU Speed-up** Sept 2019 – Dec 2019
- Modelled the speed-ups achieved by CUDA devices on various benchmark tasks, using only the static features for those tasks and devices. Useful for Job Management Systems (JMS) for GPUs.
 - Associated research paper currently under submission at IPDPS 2021.

PROGRAMMING SKILLS

Languages: Python, Java, JavaScript, GoLang, CUDA **ML Libraries:** PyTorch, NumPy, Scikit-learn, Pandas
Frameworks: Hadoop, Docker, Kubernetes, AWS, Azure **Database:** SQL, DynamoDB, Redis, MongoDB

SELECTED COURSEWORK

Machine Learning, Deep Learning, Computer Vision, Maths for CS, GPU, Computational Cognitive Modeling.