




Ashrya Agrawal

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Academic Qualifications

Bachelor of Engineering (Honors), **BITS Pilani, Pilani Campus**

2018-Present

- ★ Major: **Computer Science and Engineering** (Minor in Data Science) Current CGPA: **9.37/10.0**
- ★ **Relevant Courses:** Data Structures and Algorithms(10), Probability & Statistics(10), Differential Equations (10), Object Oriented Programming (10), Database Management(9), Disc. Structures in CS (10), Foundations of Data Science(10), Applied Statistical Methods(10)

Skills

- ★ **Research Interests:** Computer Vision, NLP, Reinforcement Learning
- ★ **Programming Languages:** Python, C++, Julia, C, Java, Javascript
- ★ **Frameworks:** Pytorch, OpenCV, Tensorflow, Keras, OpenAI-Gym, DeepMind Control Suite, NodeJS, Flask

Experience

- ★ **Research Intern** with [Dr. Jiahao Chen](#) (Sr. Vice President - JPMorgan, New York) and [Dr. Sebastian Vollmer](#) (University of Warwick, UK) **May 2020 – Jan 2021**
 - Benchmarked fairness algorithms and demonstrated practical considerations like generalization error. [Work](#) has been submitted to ICML 2021.
 - Developed [Fairness.jl](#), a comprehensive toolkit in Julia for bias audit and mitigation.
- ★ **Research Assistant**, Advanced Data Analytics and Parallel Technology Lab, BITS Pilani **Jan 2020 - Present**
 - Working to improve SOTA for Video Description generation under [Prof. Navneet](#) and [Prof. Poonam](#)
 - Explored Computer Vision in-depth with various Spatio-Temporal and Reinforcement Learning methods.
 - Used unsupervised word embeddings to improve captioning.
 - Explored use of first Visio-Textual Knowledge Base in Video Description generation.
- ★ **ML Intern** at Wipro Limited **May 2020 – June 2020**
 - Worked on NLP of Chatbot to be used by 170k Wipro employees for automatic query answering.
 - Used Deep Learning, BERT and feature vectors for NLP Component.
- ★ **Teaching Assistant**, Computer Science Department BITS Pilani **Aug 2019 - Present**
 - Taught Computer Programming and Data Structures & Algorithms through Theory and Lab Sessions.

Other Projects

- ★ Implemented Deep Deterministic Policy Gradients algorithm for Humanoid task using DMC suite of DeepMind.
- ★ Implemented Rainbow Deep Q-Network for playing Breakout using Reinforcement Learning.
- ★ Developed a voice assistant with automatic Object Detection to aid navigation, memory issues for Alzheimer patients using ResNet, cloud, NodeJS, etc. Helps patients by telling them the place where they kept the object they are searching.
- ★ Created a Friend Affinity Finder that performs NLP analysis of the social media profiles of friends, generates affinity score for friends and clusters them.

Achievements

- ★ **National Winner** of the Hackathon IBM Hack Challenge.
- ★ Recipient of the prestigious **KVPY Fellowship** twice by Dept. of Science and Technology - Govt. of India and IISC Bangalore. Secured **All India Rank 182** while competing with about 60,000 other students in grade 12 and **All India Rank 685** while competing with 50,000 other students in grade 11.
- ★ Selected by Caltech, USA to participate in their on-campus hackathon.
- ★ Cleared JEE Mains with **99.94 percentile (All India Rank 576)** competing with 1 Million students.
- ★ Cleared JEE Advanced with All India Rank 1694 competing with 0.16 million students.
- ★ National **top 1 %** in National Standard Examination in Physics and National Standard Examination in Chemistry.

Organizations

- ★ **Core Team Member**, Association for Computer Machinery, BITS Pilani – Student Chapter **Aug 2018-Present**
 - Delivered hands-on sessions of programming to unprivileged high school children.
 - Delivered Lectures on Prototype development, Introduction to Python Programming
 - Developed Backend for Checkmate 2019, a bi-annual puzzle-based event.