

Antreev Singh Brar

Sophomore, IIT Kanpur

Department of Computer Science and Engineering

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2019 - Present	B.Tech in Computer Science and Engineering	Indian Institute of Technology, Kanpur	9.72/10
2019	Class XII (CBSE)	LRS DAV Sr. Sec. Model School	92%
2017	Class X (ICSE)	Assumption Convent School, Abohar	94.8%

Achievements & Awards

- Awarded **Aditya Birla Scholarship** for being amongst top **15** candidates selected across all IITs
- Awarded **Academic Excellence Award** in academic year **2019-20** for exceptional performance in academics at IIT Kanpur
- Achieved **All India Rank 119** in IIT JEE-Advanced 2019 out of 245,000 candidates
- Achieved **All India Rank 179** in IIT JEE-Mains 2019 out of 1.3 million candidates
- Achieved **All India Rank 72** in KVPY 2019, Conducted by IISC and Gov. of India
- Among **top 1%** in **NSEC** 2019, and qualified for **InChO** conducted by HBSCE in 2019
- Among **top 1%** in **NSEA** 2019, and qualified for **INAO** conducted by HBSCE in 2019
- Awarded **NTSE Scholarship** by the Gov. of India for being amongst top **1000** students across the nation
- **Papertowns: An AR product** approved under the Pre-seed Ideation Program, IIT Kanpur

Projects

IITKBucks

Apr'20 - Jul'20

Programming Club IIT Kanpur

🌐 IITKBucks

- Developed my own client for a custom **Blockchain based Cryptocurrency** using **NodeJS** and **ExpressJS**
- Efficiently implemented Multi-Threading for Block-Miner that runs in parallel with the HTTP server and ngrok software to tunnel the locally deployed Server
- Used Requests module to make HTTP requests to propagate blocks and data among peers

Model Zoo

Apr'20 - Jul'20

Programming Club IIT Kanpur

🌐 Model-Zoo

- Studied **Deep Learning** research papers and implemented them from scratch using **Keras**
- Explored domains of Computer Vision , GANs and MultiModal Neural Networks
- Worked with **YOLOv3**, **SS-GAN**, **ResNet-34** models and **CIFAR-10** , **MNIST** and **Flickr8k** datasets with max acc. of 91.8%

Prior-free Strategic Multiagent Scheduling with focus on Social Distancing

Jul'20 - Nov'20

Research Project under Prof.Swprava Nath

📄 Research Paper

- Implemented an effective priority-based scheduling algorithm to maintain social distancing among visitors in a crowded store
- Proposed mechanism transformed the user-preference matrix into Linear Programming problem and designated delay (payment) to each allocation via Vickery-Clarkes-Groves(VCG) rule
- Algorithm was also utilized for the backend development of Mobile application **Doori**

Speech Ledger

Oct'20 - Nov'20

FlipkartGrid 2.0

🌐 Speech-Ledger

- Developed a custom pipeline for Background noise suppression, Speaker Segmentation & Diarization, and voice-to-text translation
- Fine tuned Dual-Signal Transformation LSTM Network for Real-Time Noise Suppression, Text-independent Speaker recognition module based on VGG-Speaker-recognition as Encoder and Speaker diarization based on UIS-RNN as Decoder to work synchronously with Flipkart's voice-to-text API

Technical Skills

Programming: C, C++, Python, Javascript
Utilities: Git, \LaTeX , Bash, Keras, Scikit-Learn

Exposure: Docker, ReactNative, Verilog
Development: Nodejs, ExpressJS, HTML

Relevant Coursework

Data Structures and Algorithms

Software Development and Operations

Computer Organization

Fundamentals of Computing

Mathematics for Computer Science

Multivariate Calculus

Linear Algebra and Differential Equations

Positions of Responsibility

- **Secretary, Academics and Career Council IIT Kanpur**
- **Secretary, Programming Club IIT Kanpur**
- **Student Guide, Counselling Service IIT Kanour**