

## NANDINI AGRAWAL

nandini.agrawal\_asp21@ashoka.edu.in, 21 years  
9312266033



### EDUCATION

P.G.D (1 Year) in Computer Science	Ashoka University		2020	/4 CGPA
B.Sc in Computer Science	Ashoka University	Ashoka University	2020	3.82 /4 CGPA
CLASS XII	Mayo College Girls' School	ISC	2017	95 %
CLASS X	Mayo College Girls' School	ISCE	2015	94 %

**Subjects / Electives** Computer Organisation and Systems, Introduction to Programming, Algorithms Design and Analysis, Calculus, Programming language design and Implementation, Introduction to Machine Learning, Managing Values of a Venture, Linear Algebra, Operating Systems, Advanced Machine Learning, Discrete Mathematics, Computer Security and Privacy, Federated Learning, Big Data by Jennifer Widom, Computer Networks, Blockchain and Cryptocurrencies, Unstructured Information Processing, Probability and Statistics

**Technical Proficiency** Flutter, PyTorch, Tensorflow, Python, Socket Programming, Github, Blockchain Development, Java web applications, Vue.js, C Programming, JavaScript, Unity3D, Node.js, Dart, Hyperledger Fabric, REST, Selenium, AWS, Keras

### INTERSHIPS EXPERIENCE

**KOC UNIVERSITY | Research Intern** Jul 2020 - Sep 2020  
Implemented BlockSim-Net, a network based Blockchain Simulator. Paper accepted at [BASARIM,2020](#).

**ASHOKA UNIVERSITY | Research and Software Development Intern** Jun 2020 - Aug 2020  
Created Covidbloc, a system involving an android mobile application and a web portal that uses blockchain powered contact tracing to track and prevent the spread of COVID-19. Submitted an implementation paper at [SPACE 2020 conference](#).

**KINGS COLLEGE LONDON | Research Intern for the DeCovIndia Project** May 2020 - Aug 2020  
I worked on scrapping, analysing and classifying different data sources and policies announced by the Indian government to tackle COVID-19. The website for this project can be found [here](#).

**METLIFE | Data Analyst** Jun 2019 - Jul 2020  
I worked on regression models like simple and multi linear regression to develop a sales forecast model for analysing the sales of the company

### PROJECTS

**Secure ML - Privacy Preserving Machine Learning** Aug 2020 - Present  
Understanding and implementing some machine learning algorithms using secure multi-party computation. I also worked on a small federated learning model on the MNIST dataset.

**Conversational Chatbot - Machine Learning** Mar 2020 - May 2020  
The project dealt with building a conversational chatbot using a seq2seq model with attention. The github repository can be found [here](#).

**Hyperfunds - Blockchain** Mar 2020 - May 2020  
A simple distributed Hyperledger application that can help faculty at Ashoka University reliably spend their research funds with approval from the right administrators. The github repository can be found [here](#)

**Colouring B&W Images to Coloured Images - Machine Learning** Oct 2019 - Dec 2019  
The project dealt with converting black and white images to coloured images using convolutional neural network and other deep learning models in Python. The GitHub repository can be found [here](#).

### AWARDS AND ACCOMPLISHMENTS

**Silver Medal for Academic Achievement in Computer Science | Ashoka University** 2020  
I was awarded the Silver Medal for Academic Achievement in Computer Science for securing the second highest GPA in my batch.

**Magna Cum Laude Honors | Ashoka University** 2020  
I was awarded the Magna Cum Laude Honors for securing a GPA of 3.82 in my undergraduate years at Ashoka University.

**Winner of Triquetra Squash Championship(Women Individuals) | IIITD and DTU** 2019  
Secured the first position in an Inter-College Sports Fest in Women's Squash

**Deans List | Ashoka University** 2019  
I have been on the deans list for 5 semesters in my three years of college for excellence in academics.

**School Colours for Excellence in Squash and Computer Science | Mayo College Girls School** 2017  
School colours is the highest form of appraisal given to a student for excellence in a particular field. I received the school colours for squash and computer science.

### Publications and Conferences

**Blocksim-net| Journal name: Basarim | Publication date: Oct 9, 2020**  
Blocksim-Net is a simple, efficient, high performance, network-based blockchain simulator for Bitcoin and Ethereum networks, to better reflect reality. The presentation can be viewed [here](#).

### POSITIONS HELD

**Teaching Assistant | Ashoka University** Aug 2019 - Present  
As a teaching assistant for Computer Organisations and Systems, Introduction to Computer Programming and now Computer Networks my role would be to help students learn in and outside the class. Create Assignments and Quizzes and grade them. Provide solutions for the assignments and quizzes. Be a point of contact between professor and students and resolve any issues and report about students performance.

**Squash Captain and Computer President in School | Mayo College Girls' School** Mar 2016 - Mar 2017  
I was the captain of the squash school team having represented myself at national level competitions. I also was the head of the CS department.