

# Dhruv Agarwal

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## EDUCATION

### ASHOKA UNIVERSITY

B.Sc. (H), COMPUTER SCIENCE  
May 2019 | Sonapat, India  
Magna cum laude  
Dean's List (All Semesters)  
Major CGPA: 3.95 / 4.0  
Cumulative GPA: 3.84 / 4.0

### ASHOKA UNIVERSITY

ASHOKA SCHOLARS PROGRAM  
May 2020 | Sonapat, India  
Yet to start

### MT. ST. MARY'S SCHOOL

May 2016 | Delhi, India  
Best of 4: 95.75%  
Overall: 94%

## SKILLS

### Proficient:

Python • C++ • JavaScript •  
PHP • CSS • HTML •  $\text{\LaTeX}$  •  
MongoDB • Flask • Git

### Familiar:

C • Assembly • MySQL •  
Node.js • Bash

## COURSEWORK

Discrete Mathematics  
Probability & Statistics  
Operating Systems  
Algorithms Design  
Data Visualization  
Computer Networks  
Programming Languages  
Theory of Computation  
Computer Security  
ML; Advanced ML  
**Teaching Assistant:**  
Short Course on Big Data  
Machine Learning

## LINKS

Github:// [agdhruv](#)  
LinkedIn:// [agdhruv](#)

## WORK EXPERIENCE

### MICROSOFT | RESEARCH INTERN

May 2019 – August 2019 | Bangalore, India

- Deployed a vast low-cost air pollution sensor network across Bangalore.
- Collected 1.5 million data points per month, stored them, processed them for statistical analysis, machine learning analysis and big-data visualisation.
- Submitted a paper to ACM IMWUT and a poster to ACM SenSys.

### MIRABILIS DESIGN | SOFTWARE ENGINEERING INTERN

December 2018 – Present | Chennai, India

- Developed a tool-chain to run system-level simulations of executables compiled for different architectures for performance analysis.
- Tool will be incorporated into VisualSim, a simulation product used in system design by NASA and Samsung.

### AMPERSAND DESIGN | DEVELOPMENT INTERN

July 2017 – August 2017 | Gurgaon, India

- Developed industry standard interaction heavy web pages for the State Bank of India Card (SBI Card) website using HTML, CSS and JavaScript.
- Quality of work and commitment was rewarded with freelance job offers after completion of the internship: chatbot interface on SBI Card homepage.

## PROJECTS AND RESEARCH

### ASHOKA MENU AND SHUTTLE BOT Mar '17

- As IT Minister in the Student Government, developed a Bot to inform users about mess menu, shuttle timings, infirmary contact details.
- Over 800 unique users and 190k messages sent and received.

### ENERGY MONITORING SYSTEM Aug '17 - Dec '17

- Developed a prototype to inform the occupants of hostel rooms about their real-time energy wastage, and allow comparison with their past statistics in monetary terms.

### VAHN: VEHICLE ACCIDENT HAZARD NOTIFIER Aug '18

- Developed a real-time Smart City system for automatic detection and reporting of road accidents, using a machine learning and vision algorithm, for reduced relief response time and avoiding chaining of accidents.
- Adjudged 5th best project out of 400 teams pan-India at Hack-IIITD.

### SIGNATURE VERIFICATION/FRAUD DETECTION Nov '18

- Trained a convolutional neural network to detect forgeries in signatures to detect fraud in virtually any human-oriented setting.

### AADHAAR CYBERSECURITY ANALYSIS Jan '19 - Present

- Gauged the legitimacy of media reports against Aadhaar and suggested mitigation strategies for the legitimate ones.
- Looked for vulnerabilities in the system and reported them to UIDAI as constructive criticism.