# Aayush Aggarwal

Resumé

## CONTACT

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## **EDUCATION**

**UNIVERSITY** Indraprastha Institute of Information Technology Delhi (IIITD) B.Tech, Computer Science, class of '20 CGPA: 8.59 (upto  $7^{th}$  semester)

**HIGH SCHOOL** Delhi Public School Dwarka, New Delhi, class of 2016

## **SKILLS**

## **LANGUAGES**

C++ • C • Python • Java • C# Assembly • Matlab • Bash • SQL HTML • CSS • PHP • JavaScript

## **TOOLS & FRAMEWORKS**

Git • Latex • MongoDB • Selenium Vim • Sublime Text • Android Studio BootStrap • JQuery • Arduino

## MISC. SOFTWARE

After Effects • Premiere Pro • Vegas FL Studio • Illustrator • PhotoShop Blender • Maya • Cinema 4D • 3Ds

# **CLUBS & ACTIVITIES**

## Elite Member

FooBar Coding Club, IIIT Delhi

## Member

Evaristé Mathematics Club, IIIT Delhi

## Member

INK. Graphics Design Club, IIIT Delhi

## **Event Organizer**

Esya 2018 Technical Fest, IIIT Delhi

# Creative Team & Event Organizer

Odyssey 2017 Cultural Fest, IIIT Delhi

#### President

I.T. Council, DPS Dwarka

## Multimedia Head

C.O.R.E. Computer Club, DPS Dwarka

## LINKS

## aayush9.github.io

LinkedIn: /aayush9 Github: /aayush9 Codeforces: /aayush9 Codechef: /aayush9

## **EXPERIENCE**

## SUMMER INTERN @ MICROSOFT IDC

Manager: Mr. Arijit Sengupta

(May'19 - July'19)

- Worked with the Azure Compute team
- Experimented with new approaches to improve the existing container scheduling system for reliability & efficiency
- Received a pre-placement offer to join them full-time in 2020
- Tools: C#, Go, Python, Powershell, Kusto, Docker, Kubernetes

## UNDERGRADUATE RESEARCH

**Supervisor:** Dr. Tanmoy Chakraborty

(June'18 - Dec'18)

- Studied opinion spam on e-commerce marketplaces (amazon.in)
- Crawled review data and used data mining techniques to identify groups
- Hand-crafted characterizing features, and trained machine learning models to classify them and study identifying traits
- Tools: Python, Selenium, MongoDB, Scikit-Learn, Github

## **TEACHING ASSISTANT**

Helped teach 2 courses at IIIT-Delhi as a teaching assistant.

- Algorithm Design & Analysis

(Winter '19)

- Competitive Programming

(Summer '18)

## **WORKSHOP TRAINER**

Organisation: Codechef

(May'18 - June'18)

- Helped teach  $6^{th}$   $12^{th}$  graders fundamentals of programming and logic, data structures and algorithms
- Curated lesson plans, and logical & programming assessments
- Conducted lectures, assessments, and hands-on activities, after undergoing through rigorous pedagogy sessions from Teach for India fellows

## **PROJECTS**

**Multi-user chat server:** A communication application that allows encrypted file transmission and message communication between users over TCP incorporating public-private key exchange, along with Diffie-hellman shared key establishment.

**Super Tic-Tac-Toe AI:** Made bots to play the game of super tic-tac-toe, using min-max search with alpha-beta pruning and used it to train another bot following the reinforcement learning paradigm using the Q-Learning technique.

**Chain Reaction Game:** A game made in the form of a java applet, similar to the original chain reaction game, but with additional features like network play.

**ARM Assembly Simulator:** A C++ program that interprets and runs programs in the form of ARM assembly instructions, with the five stages of the ARM pipeline.

**Cardiosol:** An application that detects the condition of Tachycardia using webcam, Cardiosol allows easy medical checkups at home. It measures heartbeat using webcam and connects the user with doctors, in case possible occurrences of disease.

## AWARDS & ACCOLADES

- 2019 All-India  $1^{st}$ , Google Kick Start Round D (Global  $10^{th}$ )
- 2019 All-India  $2^{nd}$ , ICPC India Online Round
- 2018 All-India 7<sup>th</sup>, ACM-ICPC Kharagpur Regionals
- 2018 Second, ESYA'18 Techathlon, (a tournament of 6 events) as a lone wolf (against teams of 2), IIIT Delhi
- 2017 Master on CodeForces (Rating 2276): Top 15 in India
- 2017 All-India  $2^{nd}$ , Codechef July 10-Day Long Challenge ( $24^{th}$  global)