# Utkarsh Ahuja

# Education

2016–2020 **Bachelor of Technology**, *Indian Institute of Information Technology*, Pune, *GPA-8.37/10*.

Computer Science and Engineering

2015–2016 Intermediate, D.A.V. Centenary Public School, Haridwar, Percentage-94.20%.

2013-2014 Matriculation, D.A.V. Centenary Public School, Haridwar, GPA-9.60.

# Scholastic Achievements

Selected for **Summer Research internship** at IIIT Allahabad.

Gold Medalist in International Olympiad of English Language at class level.

Upgraded my Department from Electronics and Communication Engineering to Computer Science Engineering.

Represented my school three times in **Inter School Maths Competition**.

Secured **best rank** in school in JEE Main.

Among **top 1.83%** out of 1.5 million students across country in JEE Main 2016.

Secured **first** position in first year of college.

# Internship Experience

May 18 - July 18

**Summer Research Intern**, Indian Institute of Information Technology, Allahabad Guide- **Prof U.S. Tiwary** 

## Calculating Temporal Functional Modes for Positive Emotions

- Analyzed brain networks with Complex Networks.
- Studied and implemented various network parameters in Python and inferred the difference between male and female brain for positive emotions as well as baseline(no emotions) at different timestamps over a minute.
- Gave an acceptable implementation of finding regular network from original network while calculating Small World Propensity.

# **Projects**

Operating

#### Implementation of the shell in C

Systems

- o Implemented the shell in C.
- o Can handle the commands with/without pipe.
- Supports all commands.
- Used pid, fork and execvp to run two processes in parallel.

#### Web Dev Let's Chat

- o Designed and implemented web chatting application with Django.
- Added various features like login, signup, logout, private messaging between two users.
- o Used request methods to save new messages and to retrieve old messages.

#### Game Dev Game of Tic-Tac-Toe

- o Implemented Tic-Tac-Toe in C++.
- After 5 turns, checks the winner repeatedly in O(1).
- o After each turn, it displays the updated scenario of the game.
- o Checks if the position that is clicked already filled or not.

# Operating Implementation of OS Algorithms

Systems o Implemented various OS Algorithms(like all CPU Scheduling techniques, all Memory Allocation techniques) in C++.

## Android **Time Table App** (Ongoing)

- o Programming the time management allocation in Android Studio.
- Added features like insertion and deletion of classes.

## Web Dev Blog and Website

- Used the motivation to share knowledge, designed and implemented blog using Diango.
- o Added features like addition and deletion of posts.
- Used CSS and BootStrap to make it look more presentable.

# Skills & Interests

General Machine Learning, Databases, Distributed Systems, Algorithms

Languages C/C++, Python, Java

Development Web Development(Django), Android App Development

Tools LaTEX, MATLAB, Prolog

Others Cryptography, MySQL

### **Others**

- o Approached by Unacademy's representative to teach on their platform.
- Worked as Technical Associate in the college fest (Mridangam)
- o Participated in sports like Badminton, Carrom, etc in the sports fest.
- Participated in various inter college technical fests like MindSpark, Crendz.

# Positions of Responsibility

#### Mentor for Algorithms Class

- Took the initiative to teach Algorithms to Electronics and Communication Engineering students.
- Encouraged students to do a lot of brain storming in group to inculcate new ideas/approaches to solve problems.
- Conducted a lot of activities to help students to understand concepts clearly.