Ayush Agarwal

Third year Undergraduate,
Computer Science and Engineering,
IIT Kanpur.

B-223/10, IIT Kanpur
8090686935
ayushaga@iitk.ac.in

Education

Year	Degree	Institute	CPI
2017(Expected)	B.Tech, Computer Sc.	IIT Kanpur	8.5/10
2013	HSCE	St.Anselm's Sr. Sec. School	89%
2011	AISSE	St.Anselm's Sr. Sec. School	10/10

Achievements

- All India Rank **146** in **JEE**-Advance, 2013.

- **HackConf 2015**, **Runners up** in the nation wide **CTF** organised by IIIT-D.

- **NTSE** and KVPY **Scholar**

- Bronze in **Inter-IIT**(2015) Data Analytics competetion.

- Rank-**1** in International Mathematics Olympiad(IMO) by SOF.

- Among final **35** students selected for **OCSC** Camp for International Physics Olympiad(**IPhO**),2013 .

- Cleared Regional Mathematics Olympiad(**RMO**) and National Standard Examination in Astronomy(**NSEA**).

- Secured AIR-**8** in stage-1 National Science Olympiad(**NSO**) by SOF.

- **ACA CTF**, Finished fourth in the **CTF** organised by ACA, IITK.

Projects

- **Online Management Portal**   *under Prof. Manindra Agarwal*

    - Developed the backend **Models** and **Api** in **Scala** using the **Akka's actor model** on top of a minimal framework .
    - Developed a Cookie based **Stateless** Authentication System.
    - Established a cross host overlay network among **Dockers** in a **CoreOS** cluster using **Weave**.
    - Designed and developed the frontend using bleeding edge frameworks like AngularDart, Polymer, etc.

- **HScraper**   *under Prof. Piyush Kurur*

    - Designed and developed a web crawling and parsing library in **haskell** as part of CS628 course project.
    - HTML parser was developed on top of Parsec. Library also has support for parsing malformed HTML using html-tidy.
    - Provides functionalities similar to BeautifulSoup of python.

- **Hotel Recommendation System**

    - Developed a hotel recommendation based on the customer reviews.
    - Wrote python scripts using **BeautifulSoup** to crawl customer review data from tripadvisor.
    - Used this data for **LDA** to assign rankings to the hotels.

- **Portal for Academic Mentor System for Counselling Service,IITK**

    - Developed an online portal for better interaction of Counselling Service and academically deficient students. Used **MVC** architecture from a **Codeignitor** (php-framework).

- **Application on Delaunay Triangulation**

    - Renders image using only triangles using Delaunay Triangulation. GUI implemented using tkinter and webcam support. Used OpenCV for image processing and Manipulation.

Relevant Courses

(*)Ongoing Courses

ESC101	Introduction to Prog.	**MSO201**	Probability and Statistics
CS210	Data Structure and Algorithms	**CS202**	Logic in Computer Science
CS201	Discrete Mathematics	**CS330**	Operating Systems
CS220	Computer Organisation	**CS340**	Theory of Computation
CS345	Algorithms - II	**CS653**	Functional Programming in Haskell
CS335*	Compiler Design	**CS315***	Introduction to Databases
CS628*	Computer System Security	**CS771***	Machine Learning

Technical Skills

Languages	Haskell, Scala, C, C++, Python, Php, Dart, JavaScript, Bash Scripting
Platforms	Linux (Arch Linux, Ubuntu, CoreOS), Windows
Tools	PostgresSQL, Node.js, Angular, docker, weave, vagrant
	Git, Sbt, Octave, HTML, SCSS