ALOK KUMAR

ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	B.Tech and M.Tech in Mathematics & Computing	Indian Institute of Technology, Delhi	7.636
2017	CBSE	JNV Kottayam, Kerela	91.8%
2015	CBSE	JNV Buxar, Bihar	10/10

SCHOLASTIC ACHIEVEMENTS

- Represented Patna Region for **Regional(RMO)** & **Indian National Mathematics Olympiad (INMO)** (2014)
- **Google Kickstart** Coding Competition - **Global Rank - 248** and **All India Rank - 166** (11 July 2021)
- **Goolge Hash Code 2021:** Got **All India Rank - 332** and **Global Rank - 1778** (2021)
- Got **All India Rank 27** in **InterviewBit** coding competion by **Scalar Edge** (Dec 2020)
- Won **Samsung Star Scholarship** for Consecutive **4** Years (2017-2021)
- Selected for **Panasonic Scholarship Program** for successive **4** years (2017-2021)

INTERNSHIPS

- **Amazon, Bangalore** (May 2021 - July 2021) : Worked with **CMT(Competitive Monitoring Tool) Team**
  - Added a backend functionality in order to reflect the actual products under a given discounts after crawling the other competitor websites like Flipkart, Walmart etc.
  - Created a backend service to ignore the validation process for a set of products under given promotion category
  - Made a backend functionality for creating multiple issues page for every set of Errors under given promotion rule resulting in multiple teams collaboration simultaneously hence fast resolve time.
  - Used **Java** and **Google Guice** framework and created various **Beans** for **Dependency Injection**
  - Did the **Unit Testing** for all the functionality using **JUnit** and **Mockito** framework and deployed to **production**

- **Samsung, Bangalore** (May 2020 - July 2020): **Multi-Dimensional Resource Allocation and their Usage Prediction**
  - Implemented an efficient greedy solution for decision making in order to approximate the Maximum overall Profit
  - Accepting or Holding or Rejecting a Real Time Customer having constrain for Premium and Non-Premium Customers
  - Predicted the distribution of Customer's Usage Time of different resources for future arrival of flow
  - Used different techniques **(Autoregressive, Moving Average, Integrated, ARIMA)** for Forecasting

PROJECTS

- **Search Engine**: (*Amitabha Bagchi* [Department of Computer Science, IIT Delhi]) (Oct 2018)
  - Finding the "most relevant" set of webpages containing desired query according to their relevance order
  - Calculating "**Probabilistic Relevance**", "**Term Frequency**" and "**Inverse Document Frequency**" of webpages
  - Finding the relevance of collections of webpages with the help of **Scoring function**
- **Mobile Phone Tracking System**: (*Amitabha Bagchi* [Department of Computer Science, IIT Delhi]) (Sept 2018)
  - Solving simplified version of fundamental problem of **cellular networks**
  - Switching On/Off a Mobile and keeping track of it's **base station**
  - Finding the shortest path between base station of two phones and establish connection when a phone is called
- **Social Media Platform**: (*Amitabha Bagchi* [Department of Computer Science, IIT Delhi]) (Nov 2018)
  - Simplified version of publish-subscribe Scoial platform like Twitter, Instagram
  - Subscribing/Un-Subscribing to users and publishing New Posts, Share Post, Comments by users
  - Reading Posts of subscribed publishers according to the recent post preferred the most
- **Simple Android App**: (*Slef Made*) (May-June 2019)
  - Uses "**Firebase**" Google Cloud Messaging Platform
  - To create Customizable Surveys to collect Customers Feedback
  - Can be used to Submit users Data(like responses to various questions) and required documents
- **Sports league Team(s) Eliminator**: (*Minati De* [Department of Mathematics]) (April 2020)
  - Find which team(s) have been mathematically eliminated in a sports league given their standing at some point of time
  - Implemented **Maximum flow** formulation using **Ford-Fulkerson Algorithm**
  - Using **Min Cut** found set of team(s) for a proper reasoning behind the elimination of a team

EXTRA CURRICULAR ACTIVITIES

- Former **Robotics Club** representative (IIT Delhi)
- Represented Robotics Club IIT Delhi on **TechFest**-Asia's Largest Science Technology Festival at **IIT Bombay** in 2017
- **Activity Head** for Guest Lecture of **Tryst 2019** Technical Fest of IIT Delhi
- **Production Executive** of annual Clutural Festival of IIT Delhi **Rendezvous 2019**