# Sumanyu **Ghoshal**

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## Education

**Indian Institute of Technology Bombay**                    *Powai, Mumbai 400 076, India*
B.TECH. IN COMPUTER SCIENCE AND ENGINEERING (GRADE:9.41/10)                *2018 - 2022*

## Academic Achievements

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|---|---|---|
| 2019 | **Institute Academic Prize**, Indian Institute of Technology Bombay | *Mumbai, India* |
| 2018 | **All India Rank 160**, JEE Advanced (out of 200,000+ candidates) | *IIT Kanpur, India* |
| 2015 | **National Finalist**, Computer Society of India Young Talent Search in Computer Programming Contest | *Chennai, India* |
| 2013-18 | **TIPster**, Duke University (Awarded to the top 0.5%ile of applicants in India) | *Durham, NC, USA* |

## Projects

**Face Recognition and Autonomous Mapping Robot (https://github.com/tech-chef/Main)**        *IIT Bombay*
INSTITUTE TECHNICAL SUMMER PROJECT - 2019                        *Summer 2019*

- Designed a robot using raspberry pi 3b+ with a facial recognition module implementing the LBPH algorithm using OpenCV
- Implemented mapping of regions and finding out the point-to-point shortest path using SONAR scanners and Wavefront algorithm

**Automation of Splitting of expenses (https://github.com/samadkoita/BOIS-Splitwise)**        *IIT Bombay*
PROF. AMITABHA SANYAL                                *Autumn 2019*

- Developed a django web app to automate the addition and splitting of bills amongst various stakeholders
- Designed an SQL-based database in order to efficiently implement a feature to settle-up expenses similar to the Splitwise app
- Provided dedicated insights on the kinds of expenditure made by each user using javascript

**Dead-end Roads**                                    *IIT Bombay*
PROF. AJIT DIWAN                                    *November 2019*

- Designed an algorithm to determine the roads which always lead to a dead end by simply comparing thee out-degree of each node
- Developed a code in c++ to figure out the longest dead end in the graph with O(n+m) time complexity using the algorithm designed

**A Portal to Select and Evaluate Teaching Assistants**                    *IIT Bombay*
UNDERGRADUATE ACADEMIC COUNCIL                            *June 2019 - Ongoing*

- Currently designing a django - based web application to create a portal for professors to select, and then evaluate the teaching assistants
- Involved in the conceptualization of the product. Interacted with various professors and heads of departments to understand their requirements

**Correlating MRI Scans**                                *IIT Bombay*
PROF. AJIT RAJWADE                                    *September 2019*

- Developed a matlab script to find the correlations of 2 MRI scans, and an MRI scan with its inverse
- Found the correlations in the MRI brain using the correlation coefficient and the quadratic mutual information

## Positions of Responsibility

**Student Alumni Relations Cell, IIT Bombay**                    *Mumbai, India*
TEAM MEMBER, ALUMNI STUDENT MENTORSHIP PROGRAM                    *April 2019 - Present*

- Working on a team of 7 to co-ordinate with a pool of above 300 alumni with industrial or research background
- Co-ordinating with a mentee pool of above 500 students to ensure a strong mentor-mentee relationship
- Implementing events like Breaking the Ice and Shadow Program for improving the student-alumni relations

## Internship

**Worxogo Solutions Pvt. Ltd**                            *Bengaluru, India*
SOFTWARE DEVELOPMENT INTERN                            *July - September 2019*

- Developed a program to automate the nudges sent to the senior management of clients on python
- Implemented OpenPyXl library to import data and export information to excel sheets
- Created a Graphical User Interface (GUI) for the program using the Tkinter library

## Technical Skills

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|---|---|
| **Programming and Software Development** | C++, C, Python, Java, Bash, Git |
| **Web Development** | HTML, CSS, JavaScript, Django, SQL |
| **Data Science and Computer Vision** | Matlab, Octave, Numpy, Scipy, Matplotlib, OpenCV(Basics), TensorFlow(Basics) |