Pursuing Minors in Humanities and Social Sciences

Webpage: www.cse.iitb.ac.in/~sathvik/

ACADEMIC ACHIEVEMENTS _

- Secured All India Rank 25 in IIT JEE Advanced 2016 among 200 thousand candidates (2016)
- Achieved 99.99 percentile score in JEE Main 2016 (B.Tech) out of 1.5 million candidates (2016)
- Achieved **99.54 percentile** score in **JEE Main 2016 (B.Arch)** out of 1.5 lakh candidates (2016)
- Secured **State Rank 11** in **AP EAMCET** out of 200,000 candidates organized under Ministry of Human Resource Development, **Government of Andhra Pradesh** (2016)
- Secured **State Rank 12** in **TS EAMCET** out of 150,000 candidates organized under Ministry of Human Resource Development, **Government of Telangana** (2016)

SCHOLARSHIPS AND OLYMPIADS _

- Received Kishore Vaigyanik Protsahan Yojana Fellowship(KVPY) with an All India Rank 28 (2014)
- Amongst the top 1% students in each of the NSE in Physics & Chemistry conducted by IAPT (2015)
- Amongst the top 150 students in NSE in Astronomy in two consecutive years (2014,2015)
- Amongst the **top 30** students of the Region Coastal Andhra and Rayalaseema who qualified for **Indian National Mathemathics Olympiad (INMO)** conducted by **HBCSE,TIFR** (2014)
- Amongst the top 1% students in NSE in Junior Science conducted by IAPT (2013)
- Secured State Rank 6 in Dr A S Rao Science talent Search Examination (2013)
- Achieved All India Rank 2,22 in two consecutive years in SIMO and All India Rank 8 in SIChO conducted by SIMO Education (2012,2013)

Key Projects _

Book Store

Autumn 2017

Guide: Prof. Kavi Arya (course project)

IIT Bombay

- Developing an web application which serves as an online bookstore for reading and sharing journals and books
- Implementing features like Login, Search by Name/Genre and Uploading the journals & books and chat box using libraries of Django framework
- Building an interactive interface where users can form communities, follow others, rate and review the books

Autonomous Follow Bot

Summer 2017

Institute Technical Summer Project

IIT Bombay

- Developed a Self driving bot which follows a moving bot by maintaining a specific range of seperation
- Used OPEN CV, picamera and numpy libraries for implementing image processing with python
- Programmed Raspberry Pi in Python for controlling the bot
- Implementated PWM and PID for having smooth control over the movement of bot

Othello Game Guide: Prof. Amitabha Sanyal (course project) Spring 2017

IIT Bombay

- Developed the classic Reversi game in the Racket programming language with two-player, one-player mode
- Featured the one-player mode (Human vs. Computer) with various difficulty levels implemented using the Minimax Algorithm and Alpha-beta pruning for efficiency
- Considered various heuristic techniques to determine most optimal moves by computer.
- Implemented a LAN-Multiplayer mode to play via. a LAN wirelessly using the universe package in Racket

Image Processing Spring 2017 IIT Bombay

Guide: Prof. Amitaba Sanyal (course project)

• Developed an Image Editing tool in the Racket programming language to process an image using numerous functions and factors

- Implemented Histogram Equalization, Gaussian Blur, Perspective control and other fundamental features like crop, resize etc. for editing an image
- Created a Graphical User Inteface using Racket GUI package to make it user-friendly

Others Projects _

Crypto-Suite Autumn 2016 Self Project IIT Bombay

• Built a simple cryptosuite application using bigint class in C++

• implemented functions for encryption, decryption, key-generation, modulo multiplication and exponentiation for very large numbers and also Discrete logarithm using Baby step Gaint step algorithm

Mini-Lang Parser Spring 2017 IIT Bombay

Guide: Prof. Amitabha Sanyal (course project)

- Developed a simple parser application to parse strings using Racket Programming Language
- Implemented functions to parse numbers, alphabets, variables, terms, expressions and assignment operator

Technical Skills

C++, C, Java, Bash, Python, Racket, Prolog **Programming**

Web Development HTML, CSS, JavaScript, Django

Softwares GNU Plot, MATLAB, Git, Android Studio, LATEX, AutoCAD, Arduino

Positions of Responsibility _____

Coordinator Autumn 2017 - Present

Events | Tech Fest

- Organising 25+ Exhibits of World-Class Innovations and Technological Developments
- · Contacting & negotiating with various companies, Research Organisations and Educational Institution from 13 countries across the globe
- Leading a team of 10 Organisers in keeping track of latest innovations & technologies and invite them
- Implementing Nirbhaya Self defense and mental training workshops for women, which will be implemented in various schools and colleges of 40+ cities across India targeting 10,000+ women

Courses Undertaken .

Data Structures and Algorithms+Lab*, Software Systems Lab*, Data Analysis and Computer Science

Interpretation*, Discrete Structures*, Digital Logic Design+Lab**, Computer Networks+Lab**, Design and Analysis of Algorithms**, Logic for Computer Science**, Computer Programming and Utilization, Abstractions and Paradigms for Program-

ming, Programming Paradigms Lab

Mathematics Calculus, Linear Algebra, Differential Equations

Introduction to Electrical and Electronics Circuits, Economics*, Biology, Quantum Physics Others

and application, Basics of Electricity and Magnetism

* courses to be completed by November 2016 ** courses to be completed by April 2017

Extracurriculars _

- Successfully attended Vijyoshi Camp for the KVPY scholars held in IISc-Bangalore aimed to inculcate research skills in the students (2015)
- Built a remote controlled car as a part of XLR8 conducted by Electronics Club, IIT Bombay (2016)
- Completed an year long course under National Sports Organisation, IIT Bombay in Yoga (2016-2017)
- Represented Hostel 6 in Carroms GC conducted by Sports council, IIT Bombay (2016)
- Member of Informals organising team during Mood Indigo | IITB, Asias largest Cultural festival (2016)
- Completed a month long basic course in **Photography** conducted by **Cultural Council,IIT Bombay** (2017)
- Volunteered for Diabetes check-up camp CURED conducted by TechFest, IIT Bombay (2016)
- Worked as an organiser at E-summit conducted by Entrepreneurship Cell, IIT Bombay (2017)