RUPESH
Computer Science & Engineering
Indian Institute of Technology Bombay

160050042
UG Second Year
Male
DOB: 29/06/1998

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2018	9.60
Intermediate/+2	CBSE	L. B. S. School, R. K. Puram, New Delhi	2016	96.60
Matriculation	CBSE	RK Mission Vidyapith, Deoghar	2014	10.00

Pursuing **Minor** in **Applied Statistics And Informatics** and **Honors** in **Computer Science and Engineering**

Academic Achievements

- Secured an **AP** grade (Advanced Performer) in **Computer Programming and Utilization** *and* **Data Analysis and Interpretation** courses for exceptional performance
- Secured **All India Rank 31** in **IIT JEE-Advanced** out of 200,000 candidates *(2016)*
- Secured **All India Rank 82** in **JEE-Main** out of 1.2 million candidates *(2016)*
- Secured **All India Rank 85** in Kishore Vaigyanik Protsahan Yojna **(KVPY)** Fellowship *(2014)*
- Recipient of **scholarship** through All India Talent Search Examination sponsored by **INCEF** *(2009)*

Olympiads

- Qualified for **INAO** for being among the **top 1%** students in **NSEA** organised by IAPT *(2016)*
- Among the national **top 1%** students in **NSEP** and qualified for **INPhO** organised by IAPT *(2016)*
- Qualified for **INChO** for being among the **top 10%** students in **NSEC** organised by IAPT *(2016)*
- Achieved **International Rank 18** in finals of **National Science Olympiad** conducted by SOF *(2014)*

Key Projects

Neural Network for Image Processing *Ongoing*
Research and Development Project under Prof. **Suyash Awate**
- Single image super-resolution using neural network
- Following the ideas of EnhanceNet developed by Sajjadi *et al.*
- Using Tensorflow library in python for implementation of ConvNet
- Learning deep neural network specially various architecture of Convolutional Neural Network

GetSchedGo *Autumn 2017*
Software System Laboratory
- Developed a web time table scheduling application using Django Framework in Python
- Suggested time for a event according to the earlier chosen priority of user
- Developed professor account that can suggest events to all enrolled in the course
- Suggested events with sports APIs and maintaining statistics for user review

Game of Life *Spring 2017*
Programming Paradigms Laboratory
- Developed the cellular automation application using Racket and its functional programming tools
- Extended game of life to hexagonal cells using **abstraction and higher order functions**
- Added a statistical visualization to the simulation for further data analysis
- Varied the speed of simulation to visualise large samples like Puffer Train

Crypto-Suite *Autumn 2016*
Computer Programming and Utilization Laboratory
- Created a RSA encryptor-decryptor among with modular calculator for big integers
- Implemented **Baby-step giant-step** algorithm and **Extended Euclid** algorithm
- Used C++ for implementation along with designing big integer class functions

Other Projects

Interactive text book *Summer 2017*
Summer of Code, WnCC IIT Bombay
- Developed a website which displayed simple Probability concepts interactively using **d3.js**
- Used Textillate.js and CSS to animate the interface and increasing user appeal

Desktop buddy
HACKU Yahoo! Japan Hackathon *(2017)*
- A desktop applet which gives news and weather report from **voice** commands
- Developed in python using various news APIs after tokenising the speech API result

Encrypthor
Python Hackathon , WnCC IIT Bombay *(2017)*
- A software to encrypt test using **vigenère cipher** followed by **steganography**
- Implemented in Python and hosted with HTML interface in local server port

Basic Machine Learning *Winter 2017*
- Implemented machine learning programs such as spam filters using SVM, hand-written digit recognition using neural network, Anomaly Detection and Recommender Systems
- Developed in MATLAB as a part of programming assignment provided by prof. Andrew Ng

Technical Skills

Programming	C, C++, Java, Bash, Python, Processing, SWI-Prolog, Racket, VHDL
Web Development	HTML5, CSS, JavaScript, Django, Bootstrap
Data Analysis	Octave, MATLAB, Gnuplot, Scilab, NumPy, Tensorflow
Other Softwares	Make, Git, AutoCad, SolidWorks, Microsoft Visual Studio, LaTeX

Positions of Responsibility

Teaching Assistant

- **Computer Programming and Utilization** course under Prof. Umesh Bellur *Autumn'17*
- **Abstractions and Paradigms in Programming** course under Prof. Amitabha Sanyal *Spring'18*

Courses Undertaken

Computer Science	Data Structures and Algorithms (+Lab), Discrete Structures, Data Analysis and Interpretation, Abstractions and Paradigms for Programming (+Lab), Computer Networks (+Lab)*, Digital Logic Design (+Lab)*, Algorithms for Medical Image Processing
Mathematics	Calculus, Linear Algebra, Differential Equations, Probability Theory
Other Courses	Introduction to Electrical and Electronics Circuits, Biology, Quantum Physics and Application, Basics of Electricity and Magnetism, Economics*

** courses to be completed by April 2018*

Extracurriculars

- Team rank *468* in **picoCTF** hosted by **Carnegie Mellon University** *(2017)*
- Passed the qualification round of **Google Code Jam** *(2017)*
- Member of **best freshman team** in LOGIC General Championship representing hostel *(2017)*
- Associated with National Service Scheme, IIT Bombay under **Educational Outreach** program *(2016-17)*
- 2nd runner-ups in an **ad-film making** competition organised by SilverScreen Club, IIT Bombay *(2016)*
- **Black belt** in karate under Seigo-Kai Karate-do Association of India *(2014)*
- Awarded **2nd best project** and **best demonstrator** in Chemistry Department in Biennial Science Exhibition conducted by *Ramakrishna Mission Vidyapith, Deoghar, Jharkhand* *(2013)*