



Jash Shah
Computer Science & Engineering
Indian Institute of Technology Bombay

190050052
B.Tech.
Gender: Male
DOB: 15-01-2002

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2023	
Intermediate	HSC	Pace Junior High School Andheri	2019	82.80%
Matriculation	CBSE	MKVVVIV	2017	10

Pursuing a **Minor in AI and Data Science**

ACADEMIC ACHIEVEMENTS

- Achieved **All India Rank 34** in **JEE-Advanced** out of **2.2 lakh** students (2019)
- Achieved **All India Rank 315** in **JEE-Mains** out of **9.4 lakh** students (2019)
- Among **top 30** students selected for **INMO** (National Mathematical Olympiad) conducted by HBCSE (2016)
- Secured **KVPY** fellowship with **All India Rank 99** based on written and interview examination (2017)
- Qualified for, Indian National Junior Science Olympiad (**INJSO**) and Indian National Astronomy Olympiad (**INAO**) along with **300** other students from all over the country (2016 & 2017)
- Ranked among **National Top 1%** in **NSEJS** (National Standard Examination in Junior Science) (2017)
- Scored 400 out of 450 marks in BITSAT examination conducted by the BITS, Pilani (2019)

INTERNSHIP

Detect damage on ship container

Summer 2021

NEC lab India

Research Intern

- Using python libraries like OpenCV and Numpy seamlessly merged damages in cars to ship containers to increase the size of the dataset and data augmented images to make the model robust.
- Developed a model using **Mask RCNN** and COCO dataset for transfer learning for **object detection**.

KEY PROJECTS

Gestures for 3D space

Summer 2020

Seasons of Code

Web and Coding Club, IIT Bombay

- Implemented a **One-Shot Learning Network** using **Siamese Neural Networks** on 15 gestures
- Designed a Gesture classifier model using **transfer learning** with **VGG16**, Resnet35 & Densenet 131
- Implemented **Convolution Neural Network** model to play Google Dino game using hand gestures
- Explored **web scrapping** to mine large data from websites and **OpenCV** to process digital images

Dhwani: A Stammer Friendly Voice Assistant

Summer 2020

Institute Technical Summer Project

IIT Bombay

- Part of 4 member team that developed Dhwani, a **Multilingual Android voice assistant**
- Implemented **Levenshtein Algorithm** to detect stammering and execute meaningful voice commands
- Implemented **Neural Machine Translation** Model for Voice Polynomial Calculator, using **TensorFlow** Lite
- Implemented **Text Classifier Model** with **Word Embeddings**, for using Google Maps, or setting up an Alarm

Notify Me

September 2020 – December 2020

Amitabh Sanyal — Course Project

IIT Bombay

- Developing a **Centralized Notification System** that notifies all users about upcoming project deadlines
- Developing a dashboard website with robust features such that Admin of the group can modify the message to be send to all the users and the Admin receives message on number of users who have read the message.
- Implemented using python based web framework **Django** and frontend using Javascript libraries mainly React
- Devising **Android** and **iOS** applications using **Android studio**

Image Processing

September 2020

Amitabh Sanyal — Course Project

IIT Bombay

- Implemented K means algorithm for **Image compression** using **Lloyd Algorithm**
- Replaced all color vectors in an Image with their **K Cluster Centroids** using **KMeans Algorithm**
- Reconstructed Image from given (possibly overlapping) patches while minimising the **salt and pepper noise**

Computable Performance Bounds on Sparse Recovery

March 2021-May 2021

Ajit Rajwade — Course Project

IIT Bombay

- Worked in a team of two and reproduced research paper, with the experiments repeated.
- Linear matrix equation using l1 norm minimization and sparsity vector can be solved using RIP whose verification is NP-hard and Mutual coherence which has loose sufficient condition.
- To find a method whose sufficient conditions are tight and verifiable in polynomial time

Programming Contest Website

December 2020

Rushikesh Joshi — Winter Project

IIT Bombay

- Developed **script** files to check the accuracy of the coder's code by running through multiple test cases and comparing them to answer files. Script files were written for Python , Java ,C and C++ in **Bash** language
- Frontend of the website was made with **Bootstrap**. Background was made dynamic using **particle.js**

TECHNICAL SKILLS

Programming Languages	C++ , Python , Java, Bash, AWK, Django
Web Development	Node.js, HTML/CSS, Bootstrap, PHP, JavaScript, React, Laravel
Data Science	MySQL , Numpy , Pandas , Scipy , Matplotlib , Keras , TensorFlow
Software Skills	Android Studio, MATLAB, \LaTeX , GIT, AutoCAD, Arduino, OpenCV

POSITIONS OF RESPONSIBILITY

Teaching Assistant in Quantum Physics

December 2020 - March 2021

PH107 — Quantum Physics And Application

IIT Bombay

- Selected to teach a class of 40 freshmen, evaluate exam paper and conducted quizzes to assist them in course

Techfest Web Coordinator

July 2020 - December 2020

Asia's largest Science and Technology festival

IIT Bombay

- Contributed in developing a **responsive blog page** for an initiative, **HOPE**(Healing Occurs with Positivity)
- Learned **SQL** database and web frameworks like **PHP & Laravel** and **Javascript** libraries like **Three.js**

COURSES UNDERTAKEN

Core Courses

Data Structures and Algorithms	Abstraction & Paradigms of Programming	Discrete Structures
Data Analysis & Interpretation	Computer Programming & Utilisation	Software Systems Lab
Digital Logic Design (+ Lab)	Design and Analysis of Algorithms	Logic for CS
Computer Networks (+ Lab)	Advanced Image Processing	Calculus
Artificial Intelligence and ML	Introduction to Probability Theory	Linear Algebra
Operating Systems	Fundamentals of Digital Image Processing	Computer Architecture

EXTRACURRICULARS

- Successfully completed a year long **keyboard** course under National Sports Organisation (NSO) (2019)
- Participated in multiple Codechef long challenges & Codeforce contests. **Codeforce - 1915** | **Codechef - 2029**
- 16th rank in International Coding Marathon 2021 organised by IIT(BHU), Varanasi
- Developed a **joystick controlled wheelchair** which could stop automatically on **object detection** at a distance of few feet. Won several regional science competitions for the project
- Implemented **navigation bar** in Techfest App and also supervised the blogs in the applications (2019)
- Secured **2nd** rank in Maharashtra for **Vedic Maths** Competition(UCMAS) (2009)
- Secured **Silver Medal** in Homi Bhabha Science Competition conducted by Science Teachers' Association (2016)