



Tanvi Ganesh Joshi
Mechanical Engineering
Indian Institute of Technology Bombay

200100158
B.Tech.
Gender: Female

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2024	
Intermediate	CBSE	GVN Global School, Bhopal	2020	
Matriculation	CBSE	Jawaharlal Nehru School, Bhopal	2018	

Pursuing a **Minors in Computer Science and Engineering**

PROJECTS UNDERTAKEN

- **Lasso Game | CS101 course project, IIT Bombay** (Dec'20-Mar'21)
Guide: Prof. Kameswari Chebrolu, Department of Computer Science and Engineering, IIT Bombay
 - Successfully fixed bugs in a C++ based lasso video game in which the player's points increase on catching and yanking a coin by tossing the lasso
 - Added further enhancements to the game: Bombs that caused a decrease in points upon catching, speed up coins that increased the lasso speed and hence improved the ability to successfully catch a coin
- **Music To Your Mood | Institute Technical Summer Project 2021, IIT Bombay** (Mar'21-July'21)
Team project under the Institute Technical Council, IIT Bombay
 - Basics of Python, Numpy, Matplotlib, Machine learning, deep learning and neural networks
 - Used FER2013 dataset and Keras package, trained our model made with convolutional neural networks to take real time images with camera
 - Classified the images of a person into 5 emotions of happiness, sadness, anger, neutral and fear, integrated a playlist of songs to the model using the SpotiPy library
- **Quantum Computing, Information and Tech | Summer Of Science 2021, IIT Bombay** (Mar'20-July'21)
A learning project under the Maths and Physics Club IIT Bombay
 - Basics of quantum mechanics, Qubit states, superpositions, application of quantum gates
 - Basic ideas behind quantum teleportation, algorithms, representation of quantum circuits
- **OTP based Authentication | EE101 course project, IIT Bombay** (Nov'21)
Guide: Prof. Subhananda Chakrabarti, Department of Electrical Engineering, IIT Bombay
 - Designed and implemented a circuit to grant access if the user enters the same three digit number as the OTP
 - Access granted indicated by a glowing green LED whereas access denied indicated by a glowing red LED
 - Used encoder ICs to convert the decimal digits to binary and then compared the digits with the OTP by using 4-bit comparator ICs
- **Electric Discharge Assisted Surface Texturing** (Dec'21 - present)
Guide: Prof. Soham Mujumdar, Department of Mechanical Engineering, IIT Bombay
 - Aiming for better hydrophobic surfaces
 - Learnt the various types of electric discharge machining processes.

EXPERIENCE

- **Winter internship at Analytics at Lafarge Holcim Services, India** (Dec'21)
 - Part of the ICare project in the advanced analytics team in collaboration with Holcim Australia and New Zealand
 - Used DBeaver software and determined connectivity of raw data tables with API
 - Helped in developing python codes to extract column names, primary keys and data types for various entries and in downloading one particular huge file in parts

SCHOLASTIC ACHIEVEMENTS

- Secured **percentile** in *IITJEE Mains* amongst **1.1 million** candidates (2020)
- Ranked in the aspirants appeared in *IITJEE Advanced* amongst **0.15 million** shortlisted candidates (2020)
- Awarded the *Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship* administered by the Indian Institute of Sciences (2018)
- Qualified Stage 1 of *National Talent Search Examination*, MP state with **State Rank** and **Bhopal City Topper** (2017)

TECHNICAL SKILLS

Programming C++, Python, L^AT_EX, Arduino
Libraries Numpy, Scipy, Matplotlib, SpotiPy

COURSES UNDERTAKEN

Mechanics Strength of Materials*, Manufacturing Processes I*, Mechanical Measurements*, Solid Mechanics, Thermodynamics, Fluid Mechanics, Structural Materials, Engineering Graphics and Drawing
Other Data Structure and Algorithms*, Logic for Computer Science, Computer Programming and Utilization, Intro to Electrical and Electronics Circuits, Economics, Introduction to Numerical Analysis*, Calculus, Differential Equations, Linear Algebra, Biology, Basics of Electricity and Magnetism, Quantum Physics and Application, Physical Chemistry, Organic and Inorganic Chemistry
**to be completed by April '22*

EXTRA-CURRICULAR ACTIVITIES

- Completed Diplôme d'études en Langue Française niveau A1 and A2 ('15, '16)
- Participated in the VIJYOSHI 2019: National Science Camp at IISER Kolkata (8-10 Dec'19)
- Participated in State Level Camp of Vidyarthi Vigyan Manthan 2017 exam (27 Feb'17)
- Won the first prize in Inter-School Annual Science Quiz amongst 30+ other schools at Regional Science Centre, Bhopal ('18)
- Participated and received an honorable mention in All India Essay Writing Event by Sri Ram Chandra Mission and United Nations Information Centre for India and Bhutan ('17)
- Awarded Anirban Chakraborty Award and Late Usha Tawde Award by Jawaharlal Nehru school for academic performance ('18, '16)
- Awarded certificates of distinction in Australian National Chemistry Quiz ('14, '15)
- Qualified for the semi-finals of Classmate Spell Bee ('16)
- Participated in summer camps in Regional Museum of Natural History ('14)
- Completed one year of Yoga under NSO at IIT Bombay ('20)
- Actively participated in summer workshops and various quizzes at Regional Science Centre, Bhopal and in debates, speeches and quizzes at Jawaharlal Nehru School