



Siddharth Jeedula
Chemical Engineering
Indian Institute of Technology Bombay

23B0378
B.Tech
Gender: Male
DOB: 16/06/2006

Examination	Board	Institute	Year	Grade
Intermediate	TSBIE	Sri Chaitanya Junior College	2023	97.90%
Matriculation	TS SSC	SPR School Of Excellence	2021	10

SCHOLASTIC ACHIEVEMENTS

- Secured **Top 3.3 Percentage** in **JEE Advanced Examination** among 0.18 million+ candidates ('23)
- Achieved **99.78 percentile** in **JEE Main Examination** among more than 1.1 million candidates ('23)
- Achieved **99.77 percentile** in **TS EAMCET** among 0.3 million+ candidates from Telangana ('23)

KEY PROJECTS

Reinforcement Learning | *Seasons of Code*

(Summer '25)

WnCC, IIT Bombay

- Developed RL agents like **Q-Learning**, **Deep Q-Networks**, **PPO**, implementing replay buffers, target networks, and convolutional DQNs for stable learning on environments like Snake and OpenAI Gym tasks
- Engineered a frame stacked CNN Actor Critic policy in PyTorch for **CarRacing-v3**, using grayscale preprocessing, temporal stacking, discrete to continuous action mapping for smooth autonomous driving
- Evaluated and compared RL algorithms using **training curves**, **rewards**, and video rollouts, exporting MP4 simulations and analyzing policy performance across Q-Learning, DQN, PPO, CNN based controllers

Face Recognition Project | *WIDS: Winter in Data Science*

(Winter '24)

Analytics Club, IIT Bombay

- Developed a **Siamese neural network** in **TensorFlow** for one-shot face verification, leveraging contrastive loss and training on structured triplets of anchor, positive, and negative images to learn facial similarity
- Implemented real-time image capture and pre-processing with **OpenCV** for triplet training sampling
- Combined **CNN** based feature extraction with computer vision to enable efficient face-based authentication
- Used **GPU acceleration** and custom data loaders to optimize triplet training and improve model performance

Next Word Predictor using Transformers | *Learners' Space*

(Summer '25)

WnCC, IIT Bombay

- Built and fine-tuned **GPT-2** transformer for next-word prediction using **WikiText-2** and **Hugging Face**
- Implemented tokenization, model adaptation, and preprocessing with **AutoTokenizer** and **Trainer API**
- Evaluated model using **perplexity** and **top-k** accuracy for predictive performance on structured text

OTHER PROJECTS

AI Room Guard Project | *Self Project*

(Autumn '25)

- Developed a multi-modal AI guard agent in Python by integrating voice activation (**SpeechRecognition**), high-accuracy face recognition (**DeepFace**), conversational LLM (**Groq API**) for security and interaction
- Engineered a robust face verification module by fine-tuning the **VGG-Face** model with a custom cosine similarity threshold, enabling the system to accurately distinguish trusted users from unknown individuals
- Implemented an autonomous monitoring loop that activates via voice activation, then captures webcam footage, triggers verbal warnings for an unknown person, or delivers a custom greeting to a trusted user

Gesture Based Text Creation And Recognition | *Self Project*

(Summer '24)

- Designed a high-precision **CNN** using **TensorFlow** for accurate **MNIST** handwritten digit recognition
- Used **MediaPipe** for accurate hand tracking and gesture recognition to enable contactless system interaction
- Implemented real-time gesture-based system controls by integrating **Pyaw** for volume adjustment and **WMI** for brightness control, enabling seamless, touchless interaction on Windows using hand tracking

Contacts List | Self Project

(Autumn '25)

- Built a responsive, singlepage **contact management** web page from scratch using **React** and **Tailwind CSS**, adding smooth animations with Framer Motion to create a highly polished, modern user interface
- Implemented all key features for a dynamic contact list, including adding, editing, and deleting contacts, added live search, a favorites filter, alphabetically grouped contacts, dark/light mode using React state
- Saved all user data including contacts, photo uploads, app settings directly in the browser's local storage
- Deployed the application to a live URL using **Vercel** and managed the project codebase on **GitHub**

Portfolio Website Development | Self Project

(Spring '25)

- Designed and developed a personal **Portfolio** website to showcase projects, resume, and contact information
- Used JavaScript-based interactivity, for project filtering, smooth scrolling, and responsive navigation bar
- Deployed the portfolio website using **GitHub Pages**, ensured cross-device compatibility, improved load performance, and followed semantic **HTML** and **CSS** best practices for clean structure and appearance

POSITION OF RESPONSIBILITIES

Events and Public Relations Coordinator | E-Cell, IIT Bombay

(2024-2025)

- Organized **EnB Meetup** and **Startup Expo** linking **150+** startups with **30+** mentors and investors
- Led **FInCoF** platform, onboarding **150+** startups and enabling **120+** student internships
- Contributed to **Founders' Garage**, helping **200+** enthusiasts explore startup ideas through **7** sessions
- Organized **E-Summit'25**, a flagship entrepreneurial event featuring speaker sessions, a startup pitch competition; led a team of **11**, handled speaker coordination, worked closely with PR and marketing team

SOC Mentor | Seasons of Code

(Summer '25)

WnCC, IIT Bombay

- I have mentored 5 students during **SOC 2025** on the topic: **Web Development** for 6 weeks
- Guided mentees in building fully functional personal **portfolio** websites using HTML, CSS, and JavaScript
- Helped students understand concepts of responsive design, code practices, and Git-based project workflows

Mentor | Abhyuday, IIT Bombay

(Spring '24)

- Mentored **30+** students from various colleges in planning impactful projects and exploring opportunities
- Conducted interactive sessions to enhance creativity through innovative tasks and hands-on activities
- Guided students in crafting strategies for social impact using real-world challenges and applied learning

TECHNICAL SKILLS

Languages	C++, Python, L ^A T _E X
Software	Git, LaserCad, Arduino IDE, Fusion360, Blender
Libraries	NumPy, Pandas, Matplotlib, SciPy, Scikit-learn, PyGame, PyTorch, TensorFlow, Keras, Open CV, Mediapipe
Web Development	HTML, CSS, JavaScript, React, Tailwind CSS, Framer Motion, Vite

COURSES UNDERTAKEN

CS and Data Science	Computer Programming and Utilization Advanced Topics in Machine Learning, Statistical Machine Learning and Data Mining, AI and Data Science
Mathematics	Numerical Analysis, Differential Calculus, Integral Calculus, Linear Algebra, Differential Equations
Chemical Engineering	Material and Energy Balances, Chemical Engineering Thermodynamics, Process Fluid Mechanics, Chemical Reaction Engineering, Heat And Mass Transfer, Separation Processes, Chemical Engineering Lab
Other	Introduction to Classical and Quantum Physics

EXTRACURRICULAR ACTIVITIES

- Completed a structured **Data Structures and Algorithms** bootcamp and actively participated in competitive programming contests to strengthen problem-solving skills conducted by WnCC x GFG DSA Bootcamp
- Completed a year-long training in **cricket** under the National Sports Organization (NSO) with **2 Silver**
- Competed in **kho-kho** tournaments like TELCA, GC, Freshiesta earning **2 Silver** and **3 Gold** medals