Manas Poddar

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B.Tech - Chemical Engineering
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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech	Indian Institute of Technology, Tirupati	8.35	2021-Present
Senior Secondary	UP Board	82.4%	2021
Secondary	ICSE Board	93.0%	2019

EXPERIENCE

- **PSE Lab, IIT Tirupati** *Sept 2023 - Present*
  Student Researcher, under **Prof. Nabil M** Tirupati, India
  – Modeled the **William Otto reactor dynamics** in real-time using the **finite element method** and created a **DDPG model** with Gymnasium and Stable Baseline to track set-points from any initial state.
  – Currently working on a **Evaporator unit**, modeling the reactor using Python with appropriate **numerical techniques**.

PROJECTS

- **My Buddy** | 🌐 Live *March. 2024 - April. 2024*
  Google AI Hackathon Project Github
  – Developed an AI-powered web application that facilitates **personalized, empathetic conversations** using Gemini LLM, enabling users to create chat environments tailored to their emotional needs.
  – Integrated prompt engineering to deliver unique responses in various personas (friend, parent, counselor), providing comfort and emotional support.
  – **Tech Stack:** React JS, Express JS, google gemini api, Mongo DB

- **CertiMailer** | 🌐 Live
  Personal Project Github
  – Developed a full-fledged platform that automatically generates and distributes personalized certificates to participants, with features for both developers and general users.
  – For developers: A Python script to automate certificate generation and mailing. For organizations (under development): A comprehensive web application with admin panels, verification systems, and scalable deployment
  – **Tech Stack:**Python, Shell, MongoDB, Express, React, Next.js, Tailwind CSS, GCP

- **Portfolio** | 🌐 Live
  Personal Project Github
  – Developed a Portfolio website using **Framer motion** and **AWS Lambda functions** for animation and form filling .
  – Implemented **a static blog section**, where new blog posts can be easily added by following a predefined folder structure and using Markdown (.md) files, making content management simple and efficient. Also made a custom **AI Chatbot** by finetunning gemini flash model.
  – **Tech Stack:** Next JS, AWS Lambda (serverless), Framer, Tailwind CSS, Gen-AI

Note: I have built beautiful templates and several small projects by myself, which can be found on my GitHub [link]. Two of the highlighted are Landify [link] and Valentiner [link]. Apart from these, I am also very active in reporting bugs, which can be observed in my GitHub profile.

TECHNICAL SKILLS

- **Programming**: Python, JavaScript, TypeScript, SQL.
- **Frontend Development**: React, Next.js, Tailwind CSS, React Native, Framer Motion, Three JS
- **Backend and Full Stack**: Node.js, Express, MERN Stack.
- **DevOps and Cloud**: Git, Docker, GCP (basic), AWS (basic).
- **Databases**: MySQL, MongoDB.
- **Other Tools**: OpenCV, NumPy, Pandas, Gymnasium, stable-baselines, Linux.

POSITIONS OF RESPONSIBILITY

- **Tech Team**,BTC India, IIT Bombay *Sept 2024 - Present*
- **Club Head**,Gagan Vedhi, IIT Tirupati *May. 2022 - Apr. 2024*
- **Core Member**,Idea Square IIT Tirupati *Apr. 2023 - Apr. 2024*

Awards & Achievements

- **Top Presentation** ↗ **:** Our team was honored to be recognized as one of the **top three presenters** at the **Indo-Canadian Symposium**, jointly organized by Dalhousie University and the Indian Institute of Technology Tirupati. (Feb 2024)
- **Winner - HackBells 2.0** ↗ **:** Won 24 hours National level hackathon **(out of 500+ teams)** by developing a cyber security tool having 4 different kinds of scripts for threat checking (Feb 2024) .
- **Finalist - EyeInvent** ↗ **:** Got into **top 10 teams** among **different startups and teams** all over India for making an innovative model that reduces the doctor's effort (Feb 2024).
- **Gold Medal - iGEM:** We built an app for IISER Tirupati that won them gold medal in iGEM 2023 on global level (Nov 2023).
- **Top 10% in DeepRacer Student Nationals - July 2023** ↗ **:** Received $50 as a prize for being in the top 10% in the India Region **(out of 3000+ students)** by designing an efficient and optimized Reward Function (July 2023)
- **Bronze Medal in Cognitive Garage - Inter IIT Tech Meet 11.0** ↗ **:** Awarded Bronze Medal in Cognitive Garage Problem Statement (Easy automation of complex decision making) in Inter IIT Tech Meet 11.0 (Jan 2023 - Feb 2023)
- **Silver Medalist - Cosmic Innovation Challenge** ↗ **:** Received Silver Medal along with INR 10,000 for our innovative solution to the problem of space debris in Space Tech Summit, Shaastra, IIT Madras (Jan 2023)