

NITHILESH MUCHAKURTHI

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 [LeetCode Profile](#)

[Github Profile](#)

 [LinkedIn profile](#)

EDUCATION

B.Tech (CSE) - Keshav Memorial Institute of Technology, Hyderabad, India.

Aug 2023 - June 2027

- Maintaining a decent 8.25 CGPA in the second year of my academic journey.

JNTUH DILT program – Data Science with Python Programming

Dec 2023 - July 2024

Secured an impressive A grade and acquired 15 credit points. - [Link](#)

Intermediate (MPC) – Sri Chaitanya Junior College, Hyderabad, India.

Jun 2021 - May 2023

- Achieved an outstanding 960 marks out of 1000.

SSC (10th) – Sri Chaitanya high School, Hyderabad, India.

March 2021

- Scored a massive 10 GPA.

PROJECTS

GenAI Insulin Drug Synthesis - [Live deployment](#)

- Technology Stack:** Python, PyTorch, ProGen2, MolT5, RDKit, AlphaFold2, AutoDock Vina, Flask, React, MongoDB Atlas.
- Developed custom GenAI models **from scratch** each trained to **loss < 0.3**, enabling highly accurate mutation and drug prediction.
- Built a seamless end-to-end pipeline - mutation detection, insulin logs generation, drug SMILES generation, 3D folding structure analysis and docking which reduces early drug-discovery time from months to days and R&D cost by ~90%.
- Delivered strong real-world results with **-5 to -7 kcal/mol binding scores**, deployed through a full-stack Flask - React platform for rapid protein-drug research workflows.

AI-Powered Multimodal Claims & Fraud Assessment System - [Live deployment](#) [GitHub Repo](#)

- Technology Stack:** Python, TensorFlow, PyTorch, InceptionV3, MobileNetV2, BERT, OCR, Flask, React, MongoDB.
- Built and deployed a multimodal **AI automation system** that detects damage, false claims, cutting manual verification time by **60%**.
- Implemented damage classification, part detection, severity scoring, and cost estimation pipelines, reducing claim-processing cost by **40–50%** for insurers like Chubb private limited.
- Integrated OCR, Grad-CAM explainability, and Flask–MongoDB to deliver end-to-end solution with high fraud-catch accuracy.

TabulaX – AI-Powered Tabular Data Transformer- [GitHub Repo](#)

- Technology Stack:** Python, Flask, ReactJS, Express JS, MongoDB, MySQL, Mistral-7B Transformer, Google Collab.
- Developed an LLM-based tool using Mistral-7B to automate column-wise transformations (e.g., formatting, math ops) on tabular data via zero-shot-prompting.
- Solves repetitive data processing tasks for non-tech users, reducing manual effort and time by over 60% in business workflows.

SKILLS

- Programming Languages:** Python, C, Java, C++
- Web Technologies and Frameworks:** HTML, CSS, JavaScript, Express JS, ReactJS, Flask.
- AI & ML:** Machine learning algorithms, Deep Learning- ANN, CNN, RNN, Transformers.
- Database:** MySQL, MongoDB.
- Problems Solving:** Data Structures and algorithms, Object Oriented Programming Concepts.
- Tools:** VScode, GIT, GitHub.
- Soft Skills:** Communication, Group discussions, Active listening, Oral Presentation, Decision making.

ACHIEVEMENTS AND CERTIFICATES

- Leveraged problem solving skills by tackling 200+ problems solved on leetcode.
- Participated in multiple national-level hackathons conducted by BITS Pilani, IIIT Hyderabad, SNIST, Adobe, L&T where I consistently delivered innovative, high-impact digital solutions under extreme time constraints. -[Link](#)
- Qualified round 1 of TCS CodeVita season 12, a 6-hour competitive coding exam and secured 98.2 % percentile. -[Link](#)
- Infosys Springboard- Learning Python. -[Link](#)
- TCS iON Carrer Edge - Young Professional (soft skills). - [Link](#)

EXTRACURRICULAR ACTIVITIES

Clubs and Organizations

- As an NSS PR Intern, made a significant contribution, which led to a 10% increase in views on digital pages produced over 10 posters for various events and Got Promoted to Volunteer In-charge, leading teams and coordinating events.
- Video Editor and Vocalist at Music Club *Aalap*, contributing to event videos and live performances.