

# NIKHIL UJJWAL

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## EDUCATION

**Indian Institute of Technology(IIT) Mandi**

*Bachelor of Technology in Computer Science & Engineering*

**November 2020 - Present**

*CGPA: 8.25/10*

## TECHNICAL STRENGTHS

**Programming Languages:** Python, C/C++.  
**Web Technologies:** HTML, CSS, Flask, PHP, JavaScript  
**Machine Learning:** SciKit-Learn, Tensorflow, Keras, PyTorch, OpenCV  
**Tools & Familiar Technologies:** SQL, Firebase, Git

## PROJECTS

**Mercari's Large Scale System Design Hackathon** 🚀 🔄

**March 2022**

*A Hospital management system*

*InterIIT Tech Meet 10.0 IIT Kharagpur*

- Worked in a team of 6 to develop a mobile-based app for Multi-Chain Hospitals under National Health Mission so as to **facilitate millions of users** simultaneously.
- Made use of **docker containers** to host multiple **scalable instances** of different services, used **Flask** as backend with **NoSQL** database and developed a **highly scalable solution**.

**Fake Face Image (generated using GAN's) Classification** 🚀

**December 2021**

*Deep Learning model with CNN*

*Fake-A-Thon, IIT Mandi*

- With the advent of Generative Adversarial Networks (GANs), there are lots of fake images and videos of people on the internet. These algorithms can generate very accurate and realistic looking images and videos.
- Created a Machine Learning model using CNN and achieved 80% accuracy to classify these images as real or fake.
- Led a team of 2 & Ranked **3rd** among all the competitors in Intra-IIT competition.

**Typing based Biometrics Authentication**

**December'21-Ongoing**

*ML based Application*

*IIT Mandi*

- Aiming to create an application to **authenticate users based on keystroke dynamics**, on their devices, in real-time. It will **adapt for any future changes in the typing patterns** of users as well. Will also address **privacy** concerns.
- Thus typing patterns will act as Biometrics for vulnerable devices. Also aiming to publish a research paper on this.

**Canteen Order Management System** 🚀 🔄

**October 2021**

*WebApp & MySQL based Backend*

*Dr. Varun Dutt (IIT Mandi)*

- Created a webapp that could manage database for the food orders of various users who can register on it.
- Used **HTML, CSS, Bootstrap, PHP** for creating a webpage with smooth UI and managed Database using MySQL.

## RELEVANT COURSEWORK

- Data Structure and Algorithms
- Formal Language and Automata Theory
- Computer Organisation
- Information and Database systems
- Mathematical Foundations of Computer Science
- Machine Learning (as Data Science III)

## POSITION OF RESPONSIBILITY

**WebD Team Head & Ride Coordinator**

**March 2022 – Present**

*MTB Club IIT Mandi*

*B.Tech 2024*

- Coordinated a 3-Day Bicycle Ride from IIT Mandi North Campus to Rohtang Pass, covering 317 Kms in 3 days.
- Currently working to redevelop the MTB(Mount-terrain Biking) Club website of IIT Mandi.

**Founder Representative @ Student General Council**

**October 2021 – Present**

*Student Gymkhana IIT Mandi*

*B.Tech 2024*

- Established better communication among the College Administration and students by addressing the grievances of stakeholders in the pandemic. Handled major misunderstandings to further strengthen College-Student bonding.

## SCHOLASTIC & EXTRA-CURRICULAR ACHIEVEMENTS

- Qualified for the Indian National Mathematical Olympiad-2019 & for Regional Mathematical Olympiad-2017/2018/2019; All India Rank **35** @ International Mathematical Olympiad-2017 (Level-I). Qualified for over 20 other such Olympiads.
- Ranked in the All India Top 1% (amongst over 8,00,000 Candidates) in JEE-Main 2020.
- CBSE School Topper in AISSE-2018, with 100/100 in Science Subject and a merit Certificate from CBSE and KVS.
- CBSE **AISSCE(12th) Score: 95%** Aggregate in Physics, Chemistry and Mathematics; **AISSE(10th) Score: 96.2%**
- Ranked **2nd** under speeds vertical in the Pan IIT Cycling Event; National level Sketching and Drawing Artist.