



Vishnupriya Tudu
Bachelor of Technology
in Mathematics and Computing
Indian Institute Of Technology, Ropar

+91-6351681403
vtudu17@gmail.com
GitHub
LinkedIn

EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	5.93 (Till 4th Sem)	2022-2026
Senior Secondary	Central Board of Secondary Education	75%	2022
Secondary	Central Board of Secondary Education	88.9%	2020

PROJECTS

- **Implementation of Fibonacci Heap** Sept. 2023 - Oct. 2023
C / Data Structures and Algorithms **Github**
 - Teck Stack- C
 - Demonstrated a Fibonacci heap for efficient priority queue operations: insertion, merging, extracting minimum keys, decreasing keys, and supporting Dijkstra's algorithm for optimal shortest path calculations in graphs.
 - Implemented key operations: insertion, extraction of minimum elements, key-value reduction, specific element deletion, and heap clearing.
- **Customer Cluster Analysis - KMeans Clustering Project** May 2024
Self Project **Github**
 - Tech Stack- Python, pandas, numpy, scikit-learn, matplotlib, seaborn
 - 3 main functionalities - Data preprocessing, Clustering using KMeans, Visualizing clusters
 - Data Preprocessing: Loading and exploring data with pandas and Feature scaling using MinMaxScaler.
 - Clustering using KMeans: Determining optimal clusters using the elbow method and applying KMeans for clustering.
 - Visualising Clusters: Visualizing customer segments based on annual income and spending score. Once clustering is complete, the results are visualized using scatter plots, where each point represents a customer, and different colors indicate different clusters.
- **Expenza** May 2024 - Jun 2024
React.js / Node.js / Express.js / MongoDB / Web Development **Github**
 - Developed a robust full stack Expense Management website powered by the MERN stack, offering an intuitive platform for users to seamlessly add new transactions, modify and delete their existing transactions.
 - Implemented user authentication for secure access and integrated date frequency filters for viewing transactions.
 - Displayed category-wise percentage breakdown of expenses and income.
- **Diabetic Health Assessment** June 2024
Self Project **Github**
 - Languages: C++
 - The Diabetes Diagnosis Software is a console-based application designed to collect and analyze user-provided symptoms related to diabetes.
 - Users input personal information and answer a series of symptom-related questions, processed through diagnostic algorithms to assess diabetic conditions.
 - Results are displayed based on symptom analysis, with interactive prompts for further diagnosis steps or exit options based on assessed conditions.
- **Minor Projects**
C / C++ / Java / Python
 - **Diabetic Health Assessment** in C++ | **Github**
 - **Tic-Tac-Toe** in Python | **Github**
 - **Minesweeper** in Java using OOPs | **Github**
 - **TransLingo** translator in Python | **Github**

TECHNICAL SKILLS

- **Programming Languages:** C/C++, Python, Java
- **Tools & Libraries:** :Pandas, Numpy, Tkinter, Scikit-Learn, VS Code, Github, Latex, Matlab, Arduino IDE
- **Web Development:** :HTML, CSS, JavaScript, Bootstrap, SQL, Node.js, Express.js, MongoDB, React.js

KEY COURSES TAKEN

- **CSE & Maths:** Data Structures and Algorithms, Discrete Mathematics, Theory of Computation, Probability and Statistics, Real Analysis, Differential Equations, Linear Algebra, Calculus, Numerical Analysis
- **Others:** Basic Electronics, Signals & Systems, Micro & Macro Economics, Physics for Engineers, Chemistry for Engineers, History of Techno

POSITIONS OF RESPONSIBILITY

- **Event Coordinator**, Maths Arena, Advitya Technological fest, IIT Ropar Nov. 2023 - Feb. 2024