



Education

Institute Of Engineering and Management, Kolkata, India
Bachelor of Technology - CSE (specialization in AI); CGPA: 7.5 (July 2021 - July 2025)

Contai High School, Contai, India
Senior Secondary (XII), Science; Percentage: 81 (May 2020 - June 2021)

Haludbari High School , khejuri, India
Secondary (X); Percentage: 81 (Jan 2018 - Apr 2019)

Skills Summary

Languages: Python, Java, SQL, C, HTML, CSS, JavaScript

Frameworks: Numpy, Pandas, Matplotlib, Scikit-Learn, Flask

Tools: Jupyter Notebooks, Excel, VS Code, Google Colab, PyCharm

Platforms: Windows, GitHub Codespaces, Google Cloud Console – API Library

Projects

SummarEase: YouTube Content Summarisation System / [Project Link](#)

SummarEase utilizes Pytube for audio extraction, AssemblyAI API for transcription, and Llama 2, developed by Meta, for advanced summarization algorithms. This tool simplifies content consumption by generating concise summaries from YouTube videos, enhancing information accessibility across various domains. This system allows users to make a summery content of any Youtube Video.

SIGHTx - Intelligent Image Segmentation System: / [Project Link](#)

SIGHTx is an advanced image segmentation system that supports various image formats including TIFF, JPG, and PNG. The platform uses three different patch-based algorithms: **K-Means Clustering**, **Multi-Otsu Thresholding**, and **Normal Thresholding**. It computes evaluation metrics such as Adjusted Rand Index (ARI) and Normalized Mutual Information (NMI) to automatically identify and highlight the best segmentation result. SIGHTx also provides interpretive feedback explaining why the selected algorithm performed best for a given image.

Indian Crime Statistics : / [Project Link](#)

This project involves using the YouTube API to collect Indian crime news, categorize the crimes using an LLM, and extract key details. It checks if the news already exists in a database and stores it if it doesn't. A dashboard then displays statistics for each crime category.

Over Heat Detector with Auto Cut-Off System using Op-Amp:Project Overview : Designed and implemented an Over Heat Detector with Auto Cut-Off System using Dual Op-Amp ICLM358.The circuit triggers an alarm or LED when temperature exceeds set levels, crucial for PC, kitchen appliances, and cooling systems. Integrated a 10K NTC thermistor for precise temperature sensing, enhancing safety and preventing damage.

Certificates

IBM DATA ANALYTICS: [Certificate](#)

IBM AI ENGINEER: [Certificate](#)

IBM ML_ENGINEER: [Certificate](#)

COURSERA GEN_AI: [Certificate](#)

COURSERA CLOUD COMPUTING: [Certificate](#)

OPTIMA FlexSim: [Certificate](#)

Contacts

✉ swarnavapanda@gmail.com

☎ 6296401279