Indra Sonowal

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Education

- **Indian Institute of Information Technology-Allahabad** — Prayagraj, India
  Bachelor of Technology - Electronics and Communication; GPA: 7.10 — *July 2021 - June 2025*
- **Maharishi Vidya Mandir-4** — Guwahati, India
  Secondary School Education; Percentage: 81.6 — *April 2020 - April 2021*
- **SAI RNS Academy** — Guwahati, India
  High School Education; Percentage: 91.2 — *April 2018 - April 2019*

Skills Summary

- **Languages**: Python, C/C++, JAVA basics, PHP, SQL, HTML, CSS, JavaScript
- **Frameworks**: Tensorflow, Pytorch, Pandas, Numpy, Matplotlib, Scikit-Learn, LangChain, LlamaIndex, Bootstrap
- **Tools/Databases**: Git, Github, Linux, Colab, Kaggle, MySQL
- **Relevant Coursework**: Operating System, Data Structures, Computer Networks, Database Management System, OOPS
- **Coding Profiles**: Codeforces Link, Codechef Link, Leetcode Link

Experience

- **Tech Mahindra** — Pune
  Generative AI intern — *June 2024 - August 2024*
  - **Protein Generation**: Generation of Proteins using GANS and LLMs.
  - **Progen**: Used a pre-trained progen model, an LLM, to generate protein sequences.
  - **Prompt Engineering and experimentation**: Progen is particularly trained to generate protein sequences of all types. We used Chain of Thought and other Prompt engineering techniques to generate plant-based protein sequences.

Projects

- **FindMyStyle**: [Chatbot Link]
  - A shopping chatbot that returns the top five shopping items based on user queries.
  - Utilized *OpenAI's GPT-3.5* model for query completion, spell correction, and language translation to improve query accuracy.
  - Applied Pinecone's vector database to store and retrieve product embeddings for similarity search.
  - Generated text embeddings using OpenAI's *text-embedding-ada-002* model for efficient vector search.
  - Integrated Gradio to build an intuitive user interface for querying and displaying results.
  - Processed queries by correcting spelling, completing the query, and translating non-English text to English.
- **VidTextify**: [Github]
  - Text-to-Video Generator that transforms text prompts into short videos.
  - Utilizes the *damo-vilab/text-to-video-ms-1.7b* model for generating videos from text.
  - Implemented using *Hugging Face DiffusionPipeline* with *DPMSolverMultistepScheduler* for efficient video generation.
  - Ideal for creative content generation and exploring AI capabilities in visual media.
- **AccentSense**: [Link]
  - Classified Speech signals on the basis of accent
  - Utilizes the *LSTM*,*CNN*,*Bi-LSTM* models for the task.
  - Hybrid features were used, extracted using *MFCC*,*Mel-spectrogram*,*Chroma*.
  - *Recall*, *Precision*, and *F1-Score* were used as metrics.

Publications

- **Fine-tuning the Wav2Vec2 Model for Automatic Speech Emotion Recognition System, 26th International Conference of the ORIENTAL - COCOSDA, 2023**: [Paper link]
- **Machine Learning Models for Fetal Health Classification Using Cardiotocography: Towards Improved Prenatal Care and Outcomes", 5th IEEE International Conference on Emerging Technologies, 2024** : [Paper link]

Achievements

- Expert at Codeforces, Guardian at Leetcode, 4 star at Codechef
- Secured 3rd place in Google Solution Challenge intercollege Hackathon conducted by Google Developer Group
- Achieved 2nd Rank in Code-Hell Coding Contest conducted by AlgoGeeks, IIIT-A
- Achieved Global Rank 144, 317 in Leetcode Biweekly 103, Weekly Contest 400 respectively.
- Kaggle Discussion Expert[Credential]
- Qualified for RMO 2019[Credential]
- Topper in Mathematics SOF Olympiad