

KSHETRIMAYUM GALAX SINGH

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Education

Gurukul Kangri Deemed to be University

B.Tech in Computer Science & Engineering (Pursuing)

2021 – 2025

GPA: 8.81/10

Geetanjali International School

12th MPC – CBSE

2019 – 2021

Score: 86.8%

Padma Ratna English School, Kakching

10th – BOSEM

2007 – 2019

Score: 92%

Experience

Indian Institute of Technology Guwahati

Summer Research Intern

June – July 2024

Guwahati, Assam

- Worked on "Machine Translation of Manipuri-English" under Professor Sanasam Ranbir Singh at OSINT lab, IITG
- Created monolingual corpus of 30 million tokens of Manipuri (bengali script) using Web-scraping
- Performed Text Analysis of domain-specific corpora using NLP tools like NLTK, SPaCy etc.
- Trained in LSTM, Bi-LSTM and Transformer models for neural machine translation

Projects

Handwritten Meitei Mayek Recognition | PyTorch, CNN model, Google Colab, Flask

March – April 2024

- Preprocessed Meitei Mayek (Manipuri) character image dataset using PIL library
- Trained a CNN deep learning model having dropout of 0.5 and SGD optimizer for 50 epochs
- With accuracy of over 90%, deployed a simple website using Flask framework

WebScrapper | BeautifulSoup, Selenium

June 2024

- Used Selenium to dynamically access the desired elements of the base webpage in a browser
- Then implemented BeautifulSoup to extract text/unicode from the HTML of unique webpages visited according to the specified pattern
- Also developed a python script that converts non-standard glyph encoding of a few local newspapers to proper Unicode Manipuri text

Unblock Me (automatic solver) | C++

August 2023

- It takes image or text file of an Unblock Me puzzle, and then provides a step-by-step solution of the puzzle.
- Implemented Region detection and sampling instead of using hardcoded locations approach
- Developed an algorithm to resize each image into standard pixels and determined the layout so that it allows varying qualities of puzzle images

Technical Skills

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

Technologies/Frameworks: Linux, GitHub/Git, VS Code, Google Colab, Flask, Huggingface, Kaggle

Libraries: PyTorch, OpenCV, NumPy, Pandas, Matplotlib, Seaborn, Selenium, BeautifulSoup

Relevant Coursework

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|-------------------------|-----------------------|-------------------|---------------------|
| • Data Structures | • AI/ ML | • Discrete Maths | • Operating Systems |
| • Programming Languages | • Database Management | • Compiler Design | • Computer Networks |

Certifications

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|---|---|
| • Machine Learning Specialization (Andrew Ng, Coursera) | • OpenCV Bootcamp (OpenCV) |
| • Deep Learning Specialisation (Andrew Ng, Coursera) | • Cloud Computing Fundamentals (IBM) |
| • Artificial Intelligence Fundamentals (IBM) | • Foundations of Cybersecurity (Google, Coursera) |
| • TensorFlow-Keras Bootcamp (OpenCV) | • Code In Place 2024 (Stanford University) |

Achievements

- GATE (CS) 2024 qualified with 90 percentile
- Secured 15th rank in HSLC (10th grade) 2019 conducted by BOSEM (Manipur board)
- KET - Kakching Educational Trust scholar (1st rank) from 2017 to 2021
- Department (CSE) rank 1 and top 6 in all semesters of BTech.