Amit Shukla

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Leetcode: https://leetcode.com/u/ShuklaAmit1311/ Codeforces: https://codeforces.com/profile/Iknowyou01

Education

- **Indian Institute Of Science Education and Research** — Bhopal, India
  Bachelor of Science in Electrical Engineering and Computer Science (EECS), GPA: 9.17/10 — *Nov 2020 – May 2024*

Interests And Skills

Machine Learning, Natural Language Processing, Computer Vision, Data Structures, Algorithms, C, Python, Java, C++, SQL, Go, R, Bash, Octave, Django, Pytorch, Flask, Tensorflow, Git, Linux, EC2, Postman, Selenium, MongoDB, PostgreSQL

Work Experience

- **Language Technologies Research Center (LTRC)** — IIIT Hyderabad, India
  Research Fellow — *Aug 2024 - Present*
  - Currently working on **Intent Detection** and classification in discourse relations.
  - Developed and proposed various prompt structures that could help various Large Language Models (LLM's) like **ChatGPT, Perplexity, Llama** to actively and correctly capture the underlying intents in discourse relations.
- **Inertia Astronautics** — Hyderabad, India
  Artificial Intelligence Intern — *June 2024 - July 2024*
  - Developed ground-breaking **Keypoint based navigation system** that minimizes the reliance on GPS like current systems. This system enhances efficiency and addresses connection issues and trackability challenges.
  - **Optimized** the navigation pipeline efficiency by **40%** by incorporating **YOLOv7** model for higher processing speed.
  - **Increased** the accuracy of the navigation system by **23%** via implementing Siamese Networks for similarity scores.
- **MITACS** — Edmonton, Canada
  ML Research Intern — *May 2023 - Aug 2023*
  - Conducted experiments and developed a machine learning framework to detect cognitive engagement levels of students on e-learning platforms by analyzing their posts. Attained an accuracy of **92%** with an f-score of **0.933**.
  - Implemented a comprehensive dataset categorization system for language processing experiments conducted rigorous **reliability** tests with a score of **0.88**, ensuring data quality met industry and research standards for accurate analysis and insights.

Achievements

- **ML Mentor**, DeepLearning.AI | **5 star**, Codechef | **Specialist**, Codeforces | Solved over **1000+** questions on Leetcode | **C.N.R Rao Academic Award** for **10** CGPA in freshman year

Technical Projects

- **Predicting GRB Light Curves Using Bi-directional LSTMs** — Github Link
  Python, Tensorflow, Keras, Selenium — *Dec 2022 - July 2023*
  - Developed a novel method for reconstructing Gamma Ray Burst (GRB) light curves using **Bidirectional LSTMs**. Were able to beat the current baselines and proposed methods by **10%**.
  - We introduced our method that utilizes multiple Bi-LSTM model architecture that captures intricate relationships between energy and time and predicts the energy value at a given time stamp by identifying the underlying patterns.

Publications

Predicting Missing Light Curves of Gamma-Ray Bursts with Bidirectional-LSTM : An Approach For Enhanced Analysis — ***SPAICE, 2024***

SPAICE ESA (https://zenodo.org/records/13885689)