Srinivas Raghav V C

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EDUCATION

Indian Institute of Information Technology, Kerala — India
*Bachelor of Technology in Computer Science and Engineering; **CGPA: 8.12*** — *Nov 2022 – 2026*

TECHNICAL SKILLS

Languages: Python, C/C++, Java
Frameworks and Libraries: SFML, NumPy, Flask, PyTorch, Pandas, Scikit-learn, Hugging Face Transformers
Developer Tools: Git, VS Code
Platforms: Linux, Web, Windows

PROJECTS

Building a Large Language Model (From Scratch) | *Python, PyTorch, Hugging Face* — Ongoing - Present
- Currently designing a transformer-based architecture inspired by GPT models to understand token relations and generate human-like text.
- Leveraging Hugging Face's library to integrate pre-trained models and fine-tune for NLP tasks like text classification and summarization.
- Preprocessing large-scale text datasets with `pandas` and `NumPy`, employing tokenization and causal masking techniques.
- Implementing attention mechanisms, dropout layers, and regularization techniques to optimize model training and performance.
- Planning to evaluate model performance using benchmarks like perplexity, TruthfulQA, and MMLU.

Inventory Management System | *PyQt5, Python* — Feb 2024 – Mar 2024
- Designed and developed an Inventory Management System that improved operational efficiency by **25%**.
- Implemented essential functionalities, resulting in a **30%** decrease in manual effort for product management.
- Introduced color-coded indicators for inventory visualization, reducing inventory discrepancies by **20%**.
- Enabled seamless data import/export through CSV files, leading to a significant reduction in data processing time by **40%**.
- Enhanced user experience through customizable themes and intuitive dialog boxes, resulting in a **15%** increase in user satisfaction.

MNIST Digit Recognition | *TensorFlow, Python, Flask, Matplotlib* — Sep 2023 – Oct 2023
- Created a web application for digit recognition using the MNIST dataset, achieving an accuracy of **98%**.
- Trained a neural network model with TensorFlow, reducing misclassification rates by **20%**.
- Implemented intuitive features such as a drawing canvas and image upload functionality, resulting in a **25%** increase in user engagement.
- Utilized Flask for backend development and Matplotlib for insightful performance visualization, facilitating model evaluation and improvement.

Mandelbrot Set Visualization | *C++, SFML* — Jul 2023 – Aug 2023
- Developed a high-performance visualization of the Mandelbrot Set, enabling users to explore intricate fractal patterns effortlessly.
- Optimized rendering algorithms for smooth navigation and rapid zooming, resulting in a **50%** decrease in rendering time.

Maze Solver using BFS | *OpenCV, Python* — Mar 2023 – Apr 2023
- Developed a maze-solving algorithm based on Breadth-First Search (BFS) to find the shortest path through complex mazes.
- Utilized OpenCV for real-time visualization and color-coded path highlighting, resulting in a **40%** improvement in pathfinding efficiency.