Yashashwini Singh

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Education

Ramaiah Institute of Technology **2021 - 2025**
B.E in Artificial Intelligence & and Data Science *8.75/10 CGPA*

Work Experience

Samsung R&D Institute Bangalore **November 2023 – April 2024**
Project Intern *Remote*

- Developed neural network architecture for **360-degree depth estimation** in the automotive domain. Solved challenges of all-day scene variability, diverse sensor setups, and dynamic object presence. Utilized **Surround Depth model** and multiple surround view datasets to train the network, ensuring adaptability to unseen scenes and 2% increased performance in **day and night** scenarios. **Tech Stack-** PyTorch, OpenCv. **Hardware** GPU.

Projects

TourMate - *Flutter, Python, MongoDB, TensorFlow, Maps API* **Source Code**

- Programmed a comprehensive travel planning app that assists users in creating optimized itineraries for 75 tourist destinations. Utilized **Graph Principles and Clustering Algorithms** to prioritize locations within 20 kilometers of a city. Integrated Maps API to optimize routes and saves 25% time of a user in travelling

Sentiment Analysis Using Real-Time Data - *Python, Nltk, PyTorch* **Source Code**

- Implemented a sentiment analysis project utilizing real-time Twitter data and employing an **LSTM model** with mutually inclusive classifiers. Collected a dataset annotated with sentiment classes and integrated **bigram augmentation** to enhance **model performance to F1 Score 0.85.** The model was trained to predict sentiment in any test dataset and further classify the datasets into 4 emotion categories: Happy, Sad, Angry, and Excited.

AquaLink - *Python, TensorFlow, MongoDB, Flutter* **Source Code**

- Developed a water allocation model using machine learning to optimize agricultural practices and ensure sustainable water management in 100+ water-scarce regions. Used **Self Organizing Maps and SVM** to identify areas with water scarcity and surplus. Used **Ant Colony Algorithm** to locate best water transport network in a 500 kilometeres radius.

Technical Skills

Coursework: Data Structures, Algorithm Design, Operating Systems, Database Systems, Computer Networks, OOP, Data Science, Machine Learning, Big Data Analytics, NLP, Unix
Languages: C, C++, Python
Databases: MySQL, MongoDB, NoSQL
Frameworks/Libraries: Flutter, TensorFlow, PyTorch
Developer Tools: VS Code, Android Studio, GitHub
Hobbies: Reading, Chess, Badminton

Achievements

- Achieved a contest rating of 1650, placed among top 15% competitors globally and solved **450+ DSA problems** on **LeetCode** honing problem-solving skills and mastering various algorithms and data structures. Profile
- Achieved Intermediate Problem Solving Skills, Python and MySQL Merit Certificate on **HackerRank**. Profile
- Secured **Runners Up** Position in the IEEE Blind Coding 2023 Challenge included 15 hard DSA questions to be solved within time limit.
- Presented a research paper in **ICTCS Conference 2023** on Sentiment Analysis using real time Twitter data in LSTM model with mutually inclusive classifiers. Certificate
- Project - AI Powered Legal Assistant for eliminating legal jargon was the finalist in **Smart India Hackathon 2023** under the Law and Justice Track.
- Received **Machine Learning Specialization Certification by Stanford University**, comprising three modules: Supervised Learning, Unsupervised Learning, and Advanced Learning Algorithms. Certificate

Leadership and Extra-Curricular

- **CodeRIT - Core Team Member - *Official Coding Club in College*** Problem setter for Monthly CP contests attended by 250+ students.
- **Tensor AI - Core Team Member - *Official AI and ML Club in College*** Hosted hands on workshop in Machine Learning attended by 50+ students.