Harshitha Vutukuru Muralikrishna

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Education

California State University Los Angeles *Los Angeles, CA*

M.S. in Computer Science and Engineering *Jan2023-Dec2024*

- **Courses:** Algorithms, Data Science, Artificial Intelligence, Adv. Web Programming, Machine Learning, Operating Systems, Adv. Computer Networks

RNS Institute of Technology - VTU *Bangalore, India*

B.E. in Information Science and Engineering *Aug2015- June2019*

Work Experience

Accenture *Bengaluru, India*

Application Development Analyst *Sep2019-May2022*

- Developed and maintained data-driven end-to-end transactions for Societe Generale, utilizing JavaScript, MySQL, and RESTful APIs for seamless integration.
- Followed Test Driven Development using SQL Developer, SQL Training Sets, and implemented sorted procedures for optimizing database performance.
- Collaborated with front-end developers to integrate user-facing elements with server-side logic using Java, Spring boot, and Jenkins, ensuring efficient deployment pipelines.

Spectrus Informatics *Bengaluru, India*

Full Stack Intern *Feb2018-Apr2018*

- Developed an interactive UI for an online boutique using Angular2, HTML/CSS, JavaScript enabling seamless browsing, shopping, and order processing features.
- Spearheaded the architecture and development of both frontend and backend, integrating SQL databases, CURD operations and ORM tools for efficient data handling and transaction management.
- Implemented responsive design, RESTful APIs, and JWT-based authentication to ensure smooth user experience, secure communication, and backend integration.

Projects

Brain tumor detection [Code]

- **CerebroVision** project leverages **Convolutional Neural Networks (CNN)** for early detection of brain tumors from MRI images. Implemented **ResNet50**, **VGG19**, and custom models (**HALNet1, HALNet2, SMVNet, JAPNet**) for accurate tumor classification.
- Focused on achieving high **diagnostic accuracy** using **ROC-AUC**, **precision**, and **recall** metrics to evaluate model performance.
- Applied techniques like **image augmentation**, **batch normalization**, and **dropout** to enhance model generalization and reduce overfitting.
- Aimed to minimize false negatives and positives, improving the reliability and speed of diagnosis in medical imaging.

Car Price Predictor [Code]

- Developed a **machine learning model** to predict used car prices based on features like make, model, mileage, year, fuel type, and engine size.
- Preprocessed data using techniques like **one-hot encoding** and handled missing values to improve model accuracy.
- Implemented and compared **Random Forest Regression** and **Linear Regression** models, tuning hyperparameters using **RandomizedSearchCV**.
- Evaluated model performance using metrics such as **accuracy** and visualized results with **scatter plots**, **residuals histograms**, and **KDE graphs**.
- Achieved insights into feature importance and used **train-test split** to validate models, optimizing accuracy for real-world car price predictions.

Skills

Programming Languages Python, HTML/CSS, JavaScript, Java

Machine Learning Frameworks TensorFlow, Scikit-learn, Keras, NLTK

Data Tools/Frameworks SQL, SQLite, Spring, Tomcat, Flask, PyTorch, PySpark, Git, AWS, Hugging Face, Kubernetes