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Adithya Ravi

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Education

Clemson University, Clemson, SC **Jan 2022 – Dec 2023 (Expected)**

- **Master of Science in Computer Science, GPA: 3.77**
- Graduate Coursework: Database Management System, Machine Learning: Implementation and Evaluation, Statistical Methods 1, Data Analysis, Software Design, Cloud Computing Architecture, Distributed Denial of Services, Applied Data Science, Computing and Online Relationships

Anna University, Chennai, India **Aug 2017 – May 2021**

- **Bachelor of Engineering in Computer Science and Engineering, GPA: 8.08**

Experience

Web Dev Intern, CFT Ventures, India **Mar 2020 – Sep 2020**

- Developed front-end web applications using WordPress, utilizing HTML, CSS, and JavaScript to create responsive and visually appealing web pages.
- Created and maintained technical documents for content marketing services using the OptinMonster plugin, which included documenting technical procedures, standards, and guidelines to ensure consistency and quality of the content.
- Designed and implemented web components using existing ASTRA designs templates, working closely with the design team to ensure that the final product meets the required specifications.
- Worked with a team of 4 interns and used the AdvancedCSSEditor plugin to improve readability of the website, making it easier for users to navigate and find information.
- Maintained a document that guides the website's architecture, detailing the various components of the website and their interactions. This documentation reduced the complexities of the website by 20%, making it easier to maintain and update.

Student Trainee, Barola Technologies, India **Dec 2019**

- Developed and executed programs in Objected C, resulting in improved functionality of current systems by 20
- Analyzed code on Arduino Uno board to identify areas for improvement, leading to a 15% decrease in system errors.

Languages and Technologies

- Python, C++, C, HTML, CSS, JavaScript, SQL, Java
- NumPy, Pandas, Keras, Tensorflow, Matplotlib, Seaborn, SciKit, Power BI, Bash, Git, Linux, VSCode

Technical Experience

Academic Projects

- **Rating predictions from reviews given to products in online markets:**
  (Technologies Used: Python, Libraries: NumPy, Pandas, SciKit, Seaborn, Matplotlib, TensorFlow, NLTK, TQDM, OpenAI API)
  Created four models to categorise reviews on popular e-commerce websites according to whether they are seller-related, marketplace-related, shipment-related, or product-related and then predict their rating. A CNN, RNN/LSTM, BERT, and SVM with and without splitting were among the models. With a 40.99% overall accuracy and accuracy rates of 34.12% for product-related reviews, 41.77% for delivery-related reviews, 44.70% for seller-related reviews, and 43.36% for marketplace-related reviews, the SVM model without splitting had the highest accuracy.
- **Trail of Terror:**
  (Technologies Used: Python, Libraries: turtle)
  Used Python to create a fun, interactive game with a simple GUI, enhancing game functionality with both the Singleton and Factory Creational design patterns. Implementing unique game features and ideas increased user engagement by 40%, resulting in an average playtime of 30 minutes each session.
- **Heart attack prediction using Multi-Layer Perceptron model:**
  (Technologies Used: Python, Libraries: NumPy, Pandas, SciKit, Seaborn, Matplotlib, TensorFlow)
  Developed a robust multi layer perceptron model with 6 hidden layers to train the model utilizing a dataset downloaded from Kaggle, resulting in a 88% accurate prediction on the test dataset. Implemented data preprocessing techniques such as normalization and feature scaling to improve training accuracy by 15% and reduce overfitting of the model.
- **Online Aid For Detecting Brain Tumor And Tuberculosis Using Deep Learning:**
  (B.E. Capstone Project, Technologies Used: Python, HTML, CSS, JavaScript)
  Developed and implemented an innovative front-end layout for a web application that allowed doctors/users to upload X-ray and MRI data. Convolutional neural networks ResNet and MobileNetV2 were implemented with up to 99% accuracy to detect brain

tumours and tuberculosis from user's X-ray/MRI data, decreasing the requirement for intrusive testing procedures by over 50%. The ResNet and MobileNetV2 models' metrics for performance, like precision, recall, and F1 score, improved by 5% as a result of the team's collaboration to optimise the techniques utilised in the models.

Personal Projects

- **Mask detection using transfer learning:**
  (Technologies Used: Python, Libraries: OpenCV, NumPy, Pandas, Seaborn, Matplotlib, TensorFlow) Trained a deep learning model using a dataset of over 10,000 images to detect whether a person is wearing a mask in real-time with an accuracy rate of 95% and recognize and determine whether a person is wearing a mask in real time using a webcam.
- **Fake news detection using Passive Aggressive Classifier:**
  (Technologies Used: Python, Libraries:NumPy, Pandas, SciKit, Seaborn, Matplotlib) Utilized scikit learn's CountVectorizer and TfidfVectorizer libraries to extract relevant features from text data, resulting in a decrease in model training time by 40% and using Passive Aggressive Classifier, the model is trained to distinguish fake and legitimate news from the provided training dataset, and predictions are produced on the test dataset with 93% accuracy.

Courses and Additional Experience

- Completed multiple online courses in Power BI, IoT, Arduino programming and Python data structures certified by top universities such as UC Irvine and University of Michigan.
- Certified on Kotlin basics through a comprehensive course on Udemy, gaining hands-on experience in developing Android apps using this programming language.
- Demonstrated leadership skills as Volunteer Lead with Bhumi NGO, coordinating three special events for orphan kids and managing facilities to serve program needs while efficiently coordinating food and clothing donations for disadvantaged individuals.