Mary Tess Joseph

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Education

- **Master of Science in Information Technology,**
  Arizona State University, Tempe — Dec 2022(4.0 CGPA)
  - **Coursework:** *Princ of Computations & Info Tech Arch, Cloud Architecture, Natural Language Processing, Middleware Programming and Database Security, Analyzing Big data, Advanced Database Management System,,*
- **Bachelor of Technology (Computer Science & Engineering),**
  APJ Abdul Kalam Technological University, Kerala, IN — May 2019
  - **Coursework:** *Data Structures, Design, and Analysis of Algorithms, Operating Systems, Object-Oriented Programming, Computer Network, Theory of Computation, Artificial Intelligence*, *Data Mining, and Warehousing*

Technical skills

Languages: Python, SQL, C, C++, HTML,CSS
Tools & Technologies: NumPy, Pandas, RPA, UI Path, Microsoft SQL Server, Tableau, AWS, S3
Statistical technique: Support Vector Machines, kNN, Decision Tree Classifier, Naive Bayes Classifier
Operating systems: Windows, Linux

Academic Projects

- **Speech Emotion Recognition** — **Python3, SciPy, Pandas, PyAudio, NumPy**
  - Developed an application that predicts emotions in real-time audio using MFCC and Log energy which helped to improve the efficiency by 57%.
  - Achieved an accuracy of 90% by modeling the application using MFCC and Log energy.
  - Extracted the numerical frequency data by converting audio files to .wav files using SciPy and plotted the values against emotions.
  - Trained the model using the SVM classifier which increased the efficiency of the prediction by 55%.
  - The overall accuracy of the system is 85%.
- **Brain Wave Technology in Vehicles** — **PHP, HTML, CSS**
  - Brain wave technology helps to keep track of the location of the cars and aids individuals in preventing accidents.
  - Integrated the steering of the vehicle with an EEG sensor which alerts the driver based on the brainwave readings of the driver and the co-passengers retrieved from the driver-specific app data by providing warnings and eventually shutting down the engine in case of suspicious activity by 78%.
  - The overall accuracy of 87% was achieved.
- **Library Management System** — **SQL, JSON, Couchbase**
  - Generated an ORM diagram for the project structure using ORMLite.
  - Built the Couchbase Buckets using the ORM diagram to store data which improved the efficiency of the system by 72%.
  - Implemented the connection between the client SQL queries, JSON queries to the Couchbase Buckets.

Work Experience

- **ClaySys Technologies** — Kerala, India
  Software Analyst — Jun 2019 - Sept 2019
  - Designed the **operational dashboards** using **AppForms** which have a lesser build time and are self-sufficient thereby, making the customer experience 10 times at ease.
  - Developed extended stored procedures to store the data from the operational dashboards to the database which increased the application performance and made the application scalable by 68%.
  - Connected the user interface to the database using **Microsoft SQL** Server.
  - Automated the switching between the pages of the dashboard using automation tools, **UI path,** and **Robotic Process Automation**.

Achievements

- Invitation Head of placement cell at College of Engineering Cherthala from Aug 2017 - May 2019.
- Chairperson of WIE, an affinity group of IEEE from Aug 2018 - May 2019.
- Stood in the Top 5 percentile in the IEEExtreme12.0 programming competition held by IEEE.