Bhargavi Poyekar

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Education

- **University of Maryland - Baltimore County** — **Maryland, United States**
  M.S. - Computer Science; GPA: 4.0 — Aug 2022 - May 2024
  Courses: Advanced Operating Systems, Principles of Computer Security, Neural Engineering, Machine Learning, Data Visualization.
- **Sardar Patel Institute of Technology, University of Mumbai** — **Maharashtra, India**
  B.Tech - Computer Engineering; GPA: 3.81 — Aug 2018 - May 2022
  Courses: Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Networking, Databases

Experience

- **Student Research Assistant** — **Sep 2022 - Present**
  University of Maryland Baltimore County (Part-time)
  - **ECG HRV Features**: Extracted HRV features from ECG signal data using Python.
  - **Machine Learning Models**: Improved Accuracy of ML Models by 10% and enhanced model robustness. .
  - **Data Analysis**: Analyzed data to provide valuable insights into research outcomes.
- **Laravel Developer Intern** — **Remote**
  Origin Cloud Tech — June 2020 - Aug 2020
  - **Learning Management System**: Developed scalable LMS Website using Laravel MVC Framework, improving user experience and functionality, outperforming requirements.
  - **Authentication and API's**: Streamlined system security by implementing multifactor authentication, email and mobile OTP verification, and integrating various APIs like Paypal, Razorpay, Zoom for enhanced website functionality.
  - **UI and Database**: Created a UI for the application using HTML, CSS, Bootstrap, and Javascript. Managed the database by designing a well-structured database and performing CRUD queries with join operations.
- **Website Developer Intern** — **Remote**
  Ask in City — May 2020 - June 2020
  - **Frontend and Backend**: Used HTML and PHP to add features to an e-commerce project, improving user experience and website functionality.
  - **Agile Framework**: Implemented agile methodology, attending daily scrum meetings and collaborating with team members for efficient project completion.

Projects

- **Eye Pupil Response (Time Series Analysis, Signal Processing, Machine Learning)**: Constructed a machine learning model that predicts the difficulty of math problems and response time by analyzing pupil response data with 70% accuracy. **Tech: Python, Scikit-learn, Pandas, Numpy, Matplotlib.**
- **Face Recognition Attendance System for Online Classes (Neural Network, Computer Vision)**: Created an attendance system for online classes that uses face detection and recognition algorithms. Improved the model to function in adverse conditions such as low light, head and neck tilt, and blurred images. Tech: **Python, OpenCV, Django, CNN.**
- **Domestic Violence App. (Android Application)**: Engineered an application to help victims of domestic violence by providing an anonymous discussion platform, collecting evidence, and connecting with expert counselors and NGOs. **Tech: Flutter, Dart, Firebase.**
- **EMOMUSIC: (Computer Vision, Web Development**: Identified user's emotional state via facial expression analysis and suggested personalized playlist based on analysis. Developed an advanced music player to play recommended songs customized to user's mood.**Tech: Python, Django, CNN, HTML, JavaScript, SQLite**
- **Image Steganography app (Android Application, Cryptography)**: Designed and built an **Android application** using advanced **Java** concepts to hide confidential messages within cover images using steganography techniques. **Tech: Java, Android Studio.**

Technical Skills

- **Languages and Database**: **Python, Java, C**, PHP, Go, JavaScript, SQL, HTML, Dart, MySQL, SQLite, MongoDB
- **Frameworks**: **Django, Django-Rest**, Laravel, ExpressJS, AngularJs, Flutter, Android Studio, Scikit, TensorFlow
- **Others**: GIT, Linux, Tableau, Matplotlib, Jupyter, Pandas, Numpy, Bootstrap, JQuery, API, JWT

Publications

- **Paper: Stroke Prediction using SMOTE-TOMEK and Neural Network**: **IIT Kharagpur**, India, 12th ICCCNT 2021: Proposed an **Artificial Neural Network** which gives the best **ROC score of 0.84** and performed comparitive analysis using ensemble-based, tree-based and Naive Bayes-based Algorithms. https://ieeexplore.ieee.org/document/9579763
- **Paper: Diabetes Prediction using Feature Extraction and Machine Learning Models**: Hindustan Institute of Tech. 2nd ICESC 2021: Performed **EDA** and trained various ensemble **decision tree** models, SVM, and KNN for diabetes prediction using the Pima dataset. Improved the performance of the model by using correlation based **feature selection**.