VINEETH AJITH JOHN

90 New St, Apt 1601, New Brunswick, NJ 08901

📞 732-558-8598 ✉ vineeth.john@rutgers.edu

Education

Rutgers University	**Expected 2025**
Master of Science, Data Science – GPA: 3.70/4.00	*New Brunswick, NJ*
College of Engineering Guindy, Anna University	**July 2018 – May 2022**
Bachelor of Engineering, Electronics and Communications	*Chennai, India*

Technical Skills & Relevant Coursework

Languages: Python, C++, C, MATLAB, R, SQL
Tools & Libraries: OpenCV, Keras, PyTorch, Tensorflow, Kubernetes
Coursework: Statistical Data Mining, Time Series Modelling, Probability & Statistical Inferences, Financial Data Mining, Database Management.

Projects

Predictive Modelling of War Related Fires in Ukraine   **August 2023 – December 2023**
- Leveraged statistical techniques (OLS, Ridge and Lasso Regression) to model and predict incidents of war-related fires within areas under Ukrainian control to enhance decision-making processes in conflict zone management.
- Performed Principal Component Analysis (PCA) coupled with rigorous hypothesis testing to eliminate multi-collinearity in datasets in order to enhance the robustness of the model, ensuring accurate and reliable results.
- Optimized resource allocation strategies by decreasing coordinates from 169,107 to 6,488 hotspots. Furthermore, identified that 26% of the anticipated 17 million affected individuals were concentrated within these pinpointed hotspots.

IoT-Based Liver Disease Detection using Convolutional Neural Network   **March 2022 – June 2022**
- Applied Convolutional Neural Networks (CNNs) to perform liver disease segmentation by implementing a mathematical model within the CNN framework to accurately identify abnormalities.
- Implemented a sophisticated neural network architecture by utilizing deep learning methodologies to analyze abdominal computed tomography images to distinguish between healthy and unhealthy liver conditions.
- Developed a comprehensive system by programming the Wi-Fi module (ESP 8266) and the Global System for Mobile Communications (GSM) module to autonomously update patient's health status to a central server and triggers an alert message to the designated emergency contact when liver disease is detected.

Facial Recognition Applications Using Convolutional Neural Networks   **November 2021 – January 2022**
- Developed a robust 4-layered Convolutional Neural Network using Keras and TensorFlow in Python demonstrating knowledge in image recognition and classification tasks.
- Implemented a Haar Cascade Classifier employing the Viola-Jones algorithm to extract critical facial features, including edge, line, and four-sided features.
- Achieved real-time implementation of the facial expression recognition and identification system utilizing OpenCV in Python, attaining an accuracy rate of 85%.

Research Publication

Unhealthy liver detection using Convolutional Neural Network with IoT   **July 2023**
- S. E. P. Pushpa, T. Jayasree, V. A. John, A. Subramanian, V. Chandrashekhar and S. Sankareswaran, "Unhealthy Liver Detection using CNN with IoT," 2023 International Conference on Sustainable Computing and Smart Systems (ICSCSS), Coimbatore, India, 2023, pp. 1079-1083, doi: 10.1109/ICSCSS57650.2023.10169799.

Methodology to implement Imaging applications on FPGA Basys 3 board   **August 2021**
- Co-authored and presented a paper with Dr. Ewins Pon Pushpa (Assistant Professor, ECE Department) at the 10th edition of ICCET (International Conference on Contemporary Engineering and Technology) in Chennai contributing to scholarly discussions and showcasing research excellence in the field.

Leadership Experience

Anna University Model United Nations   **July 2019**
Founder
- Introduced the concept of Model United Nations (MUN) at Anna University, diversifying student engagement beyond engineering disciplines and offering a platform for the development of versatile skills among participants from various academic backgrounds.
- Orchestrated a participation of 150+ delegates hailing from 4 states and 20 diverse colleges, concurrently overseeing a team of 25 members drawn from 2 campuses and representing 9 distinct engineering departments.