

Julisa Bana Abraham

Selected Project

SHOW OR NOT SHOW PATIENT PREDICTION: COMPARISON OF THREE METHODS

- Using Support Vector Machine, Decision Tree, and Naïve Bayes Classifier from Scikit-learn Python library to predict whether a patient is coming to an appointment or not using the dataset from Kaggle titled “No Show Appointment”

AVOCADO PRICE FORECASTING COMPARATIVE STUDY

- A time-series analysis methods comparative study between Prophet, newly designed decomposition time series prediction methods designed by Facebook, and ARIMA (accepted paper at IARIA Bustech 2018)

TITANIC PASSENGER CLASSIFICATION

- Trying to solve “Titanic: Machine Learning from Disaster” from kaggle using Naïve Bayes, Random Forest, and Deep Neural Network

DATA WAREHOUSE DESIGN FOR AVOCADO SALES OLAP

- Using MongoDB to design data warehouse Online Analytical Processing architecture for Avocado Sales in U.S.

CONTRAST ENHANCEMENT PERFORMANCE EVALUATION USING FULL REFERENCE AND NO REFERENCE METRICS

- Evaluate image contrast enhancement methods using full reference and no reference metrics (accepted paper at IEEE ICIRD 2019)

CNN BASED PLASMODIUM DETECTION USING AUGMENTED SMALL DATASET

- Designing a Plasmodium detection scheme using Laplacian of Gaussian and CNN. The proposed method obtained 97% sensitivity and 98.46% PPV using transfer learning from Resnet-50.

MULTIOBJECTIVE OPTIMIZATION IN HEALTHCARE: A REVIEW

- This paper provides a review of the latest SCOPUS indexed paper on multiobjective optimization applications to solve problems in the healthcare sector.

AN EFFECTIVE QUANTUM INSPIRED GENETIC ALGORITHM FOR CONTINUOUS MULTIOBJECTIVE OPTIMIZATION

- This paper presents a quantum-inspired evolutionary algorithm (QEA) to solve continuous multiobjective optimization problem (MOP). The proposed method employs Fast Nondominated Sorting and Crowding Distance from NSGA-II and implements all common operators of genetic algorithms (GA), such as crossover and mutations with additional Quantum Gate quantum operators. (Master’s thesis)

MALARIA PARASITE SEGMENTATION USING U-NET

- This paper presents the performance of U-Net for Plasmodium segmentation on thin blood smear images. This study also proposes to implement the Huber loss as the loss function for training the U-Net.

IMPROVING STOCK PRICE PREDICTION WITH GAN-BASED DATA AUGMENTATION

- This paper proposes a new time-series data augmentation scheme based on Deep Convolutional Generative Adversarial Network. The evaluation shows that the proposed scheme is able to reduce the mean-squared error of the classifier.