Final Year Third Year Project MT04128

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Project Title: Machine Learning Analysis

Supervisor: Wolfram Just

Abstract

In this project, the main topic is Machine Learning in Medical Imaging. The goal was to know a bit about Machine Learning and Medical Imaging. I learnt about the Tensorflow framework, Keras and Scikit-Learn. I also learnt about Convolutional Neural Networks and how they are used in Medical Imaging. I learnt how to use Tensorflow and Keras to build a model, and how to use Scikit-Learn to make a model and evaluate it. I learnt how to use Tensorflow and Keras to build a model to classify images of Malaria infected cells and Pneumonia infected lungs. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring and Custom Cross Validation. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring and Custom Cross Validation and Custom Pipelines. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring and Custom Cross Validation and Custom Pipelines and Custom Feature Union. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring and Custom Cross Validation and Custom Pipelines and Custom Feature Union and Custom Transformers. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring and Custom Cross Validation and Custom Pipelines and Custom Feature Union and Custom Transformers and Custom Estimators. I also learnt how to use Scikit-Learn to make a model to classify images of Malaria infected cells using Principal Component Analysis and Support Vector Machines with Cross Validation and Grid Search and Pipelines and Feature Union and Custom Transformers and Custom Estimators and Custom Scoring and Custom Cross Validation and Custom Pipelines and Custom