AI305L - Lab Outline

ML Revision

- Revise Linear Regression, Logistic Regression, Decision Trees, Naive Bayes, and K-Means.

DL Revision

- Revise the basics of Convolutional Neural Networks (CNNs).

MindSpore Basics

- Load the MNIST dataset and visualize it using MindSpore.

Building Networks with MindSpore

- Build, train, test, and save models using MindSpore.

MNIST Handwritten Recognition

- Develop an end-to-end model for classifying handwritten digits from the MNIST dataset.

MobileNetV2 Image Classification

- Use transfer learning with the MobileNetV2 architecture for image classification tasks.

ResNet50 Image Classification

- Fine-tune the ResNet50 model for advanced image classification.

TextCNN for Sentiment Analysis

- Build and train a TextCNN model to classify text sentiment.

RNN for Sequence Modeling

- Implement and train a Recurrent Neural Network (RNN) for sequence modeling tasks.

Custom Data Handling and Cloud Integration

- Work with custom datasets and integrate AI solutions with cloud platforms.

Model Deployment Using ExeML

- Deploy trained models using ExeML for real-world AI applications.