US Real Estate Prediction System
User Guide

Introduction

The US Real Estate Prediction System is a console-based application that allows users to configure, train, and evaluate a neural network, and finally predict US property classes using this network. This guide provides detailed instructions on using the application.

Getting Started

1. **Launch the Application**: Run the program to start the application. A welcome message will be displayed, followed by the main menu.

2. **Main Menu**: The main menu provides the following options:
   1. **Configure Neural Network**
   2. **Train Neural Network**
   3. **Evaluate Neural Network**
   4. **Predict Property Class**
   5. **Exit**

Enter the corresponding number to select an option.

Available Options in Detail

- Configure Neural Network
  - **Option 1**: Allows you to set up the neural network.
  - **Number of Neurons in Hidden Layers**: Enter comma-separated integers for the number of neurons in each hidden layer.
  - **Learning Rate**: Enter the learning rate for training the neural network (e.g., 0.01).

- Train Neural Network
  - **Option 2**: Trains the configured neural network with available data.
  - **Note**: Make sure to configure the neural network first, or a warning message will be displayed.

- Evaluate Neural Network
  - **Option 3**: Evaluates the neural network's performance using test data.

- **Note**: Ensure the neural network is configured and trained first, or a warning message will be displayed.

- Predict Property Class
  - **Option 4**: Allows you to input property details and predicts its class using the trained neural network.
  - **Note**: Ensure the neural network is configured and trained first, or a warning message will be displayed.
  - **User Input**: You will be prompted to enter details such as:
    - Number of bedrooms,
    - Number of bathrooms,
    - Acre lot,
    - Zip code,
    - House size,
    - State (from the provided list).

- Exit
  - **Option 5**: Exit the application.