Explanation of Load User Data (load_user_data)

This section explains the function used to load user-provided image or text data for evaluation or further training.

```
def load_user_data(image_folder=None, text_csv=None, transform=None):
    if image_folder:
        label_file = os.path.join(image_folder, 'labels.csv') if os.path.exists(os.path.join(image_folder, 'labels.csv')) else None
        user_dataset = UserImageDataset(image_folder, label_file, transform=transform_mnist)
        user_loader = Dataloader(user_dataset, batch_size=64, shuffle=False)
        data_type = 'image'
        sample = next(iter(user_loader))[0] if len(user_loader) > 0 else torch.zeros((1, 1, 28, 28))
        return user_loader, sample, data_type, 'User_Images'
    elif text_csv:
        user_dataset = UserTextDataset(text_csv, vocab, max_len=50)
        user_loader = Dataloader(user_dataset, batch_size=64, shuffle=False)
        data_type = 'sequence'
            sample = next(iter(user_loader))[0] if len(user_loader) > 0 else torch.zeros(1, 50, dtype=torch.long)
        return user_loader, sample, data_type, 'User_Text'
    else:
        raise ValueError('Either image_folder or text_csv must be provided.')
```

Line-by-line explanation:

- Checks if an image folder is provided:
  - Looks for a 'labels.csv' file in the folder.

  - Creates a UserImageDataset and DataLoader for the images.
  - Sets data_type to 'image'.
  - Gets a sample batch or a default tensor if the loader is empty.
  - Returns the loader, sample, data type, and a label string.
- If a text CSV is provided:
  - Creates a UserTextDataset and DataLoader for the text data.
  - Sets data_type to 'sequence'.
  - Gets a sample batch or a default tensor if the loader is empty.
  - Returns the loader, sample, data type, and a label string.
- If neither is provided, raises a ValueError.

Purpose:

- This function allows the system to flexibly load either user-supplied images or text data for evaluation or transfer learning.