Work breakdown structure for adVAE: Alzheimer's Data Variational Autoencoder

Activity 1: Set up GitHub repository

- ~~☐ Push SRS and Datasets.md to remote repository~~
- ~~☐ Push WBS to remote repository~~

Activity 2: Create WBS document

- ~~☐ Add tasks from Problem 1~~
- ~~☐ Add tasks from Problem 2~~

Activity 3: Source Training Data

- ~~☐ Look up databases online for gene expression, EEG and MRI data~~
- ☐ Identify example – training – validation – test data split
- ☐ Perform sanity checks on data sources

Activity 4: Preprocess example data for developing the model

- ☐ Create function to read example gene expression data (in .csv format)
- ☐ Clean data by removing missing values
- ☐ Normalize data
- ☐ Scale data

Activity 5: Perform exploratory data analysis on example dataset

- ☐ Visualize the dataset using appropriate plots
- ☐ Compute relevant statistics (mean, median, variance etc.)
- ☐ Identify data distribution

Activity 6: Construct VAE architecture

- ☐ Define class for VAE model
- ☐ Build VAE network

Activity 7: Implement auxiliary scripts

- ☐ Code utility functions such as weight initialization, hyperparameter tuning, KL loss evaluation, reconstruction loss evaluation, validation metrics etc.
- ☐ Create script for training model