

# Project Guide (HW2)

## Python Scripts

- `job_control.py`: Manages job submissions for computing clusters using SLURM, handling queuing and job status tracking.
- `hw1_base_skel_dropout.py`: Adapts the base HW1 model to include dropout layers for regularization in the neural network.
- `hw1_base_skel.py`: The basic neural network model from HW1, typically without regularization.
- `hw1_base_skel_regularization.py`: Extends the HW1 model by incorporating L1 or L2 regularization.
- `deep_networks.py`: Contains the neural network architectures, including layer setups and activation functions.
- `plot_figures.py`: Dedicated to generating plots from experimental results, producing the required figures for the homework.
- `symbiotic_metrics.py`: Contains functions for calculating metrics like FVAF, used to evaluate network performance.

## Shell Scripts

- `batch_dropout.sh`: Submits batch jobs for dropout regularization experiments.
- `batch.sh`: General purpose batch submission script.
- `batch_L1_reg.sh`: For submitting batch jobs that experiment with L1 regularization.

## Additional Files

- `HW2_17898017_348_stdout.txt`: Sample stdout file showing console output from a job, useful for debugging.
- `HW2 Report AML.pdf`: Contains the written analysis and reflections on the experiments, including the included figures.