Project Space Titanic

A project trying to solve the Space Titanic Competition on Kaggle

About The Project

The project is coded with pure python, and the provided files are supposed to be executed via Jupyter Notebook. The Space Titanic competition is a bi-class classification task. Therefore, We are using a 9-12 layer MLP to complete this task.

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Built With

- Pytorch
- Numpy
- Pandas

Getting Started

If you are already a python user and have Jupyter Notebook installed, you could open this project and skip this part. Both SpaceTitanicV0 and V1 should work fine, but there is a minor difference in data preprocessing (and it has a minor-to-none influence on the model).

Prerequisites

This is an example of how to list things you need to use the software and how to install them.

- Install Jupyter Notebook via Anaconda
- Access Anaconda Prompt (and activate environment)

```
activate [Environment Name]
```

- Use pip for package installation

```
pip install pytorch
pip install pandas
pip install numpy
```

Usage

Open either SpaceTitanicV0 or V1, and execute all. You may change the structure of the Neural Net, activation function, optimizer, batch size, and learning rate if you want. But we recommend using Adam (or any fast optimizer) because otherwise it may take much time on a personal computer.

To load saved models, you can edit torch.save(model, 'model/[model name]') and run the file with training skipped.

Roadmap

- [ ] SpaceTitanicV0 - the basic version
- [ ] SpaceTitanicV1 - last name feature is maintained in the training data
- [ ] Upcoming V2 - simplify the data preprocessing steps
- [ ] Variant Symmetry Cancellation - design for studying the symmetric in model weights (not included yet)

Contact

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Project Link: https://github.com/github_username/repo_name