

1 Option 1: Energy Consumption Prediction

1.1 Background

Bruno Wayne's company Mayme Enterprises have recently acquired an energy provider company. This company is part of interconnection grid operating an electric transmission system serving all or parts of Gotham City, Central City and Nanda Parbat. The hourly power consumption data (in megawatts) comes from the gauges that Barrie Allen placed for his friend Bruno. Badman needs to be able to forecast power consumption for the future so that his company can keep profiting and he can continue his nightly activities.

1.2 Goal

You are tasked with building a predictive model to forecast energy prediction. When building this model, be sure to minimize RMSE.

1.3 Code

The assignment should be delivered as a HTML/PDF format. Please provide proper comments to your code.

1.4 Data

Download link: <https://s3-eu-west-1.amazonaws.com/proserve-ai-graduate-assignment/energy/energyConsumption.zip>

2 Option 2: Detecting land types from satellite imagery

2.1 Background

The dataset includes images taken from the national agriculture imagery program. It contains images from the United States and has a high variance in different types of land types. Going from rural areas to mountains. From water to agriculture areas. In the provided link there are 6 image classes (barren land, trees, grassland, roads, buildings and water bodies).

2.2 Goal

You are tasked with building a classifier that takes in the raw image and gives back an as accurate as possible prediction of which class the image belongs to. (barren land, trees, grassland, roads, buildings or water bodies)

2.3 Code

The assignment should be delivered as a HTML/PDF format. Please provide proper comments to your code.

2.4 Data

Download link: <https://s3-eu-west-1.amazonaws.com/proserve-ai-graduate-assignment/deepsat/images.zip>