# Rubric Percentages:

Section 1: EDA 15% (Part 4: EDA)

Section 2: Quality of Analysis 15% (Part 5: Analysis and Results)

Section 3: Clarity of writing 10% (all sections)

Section 4: Quality of code 10% (Part 4: EDA and Part 5: Analysis and Results)

Section 5: Scientific Argument 15% (Part 2: Literature Review)

Section 6: Logic, Structure and Storytelling 15% (Part 1: Intro, Part 3: Methods, Part 6: Discussion, Part 7: Conclusions and Further Issues)

Section 7: Technical 10% (all sections)

Section 8: Tables and Graphs (Part 4: EDA, Part 5: Analysis and Results)

# Introduction

# Literature Review (Rubric Section 5: Scientific Argument 15% ~ 8.75 pages)

## Industry Context

## General overview models

## Review the Methodology of Research

## What packages Utilized/Available

## What Platforms are Utilized

## Model validation

## Domain knowledge

# Material and Methods

## Software

## Description of the Data

## Pre-processing Steps

## Data Cleaning

## Assumptions

## Modelling Methods

# Exploratory Data Analysis (Rubric Section 1: EDA 15% ~ 8.75 pages)

## Problem Definition

Determine the efficacy of temperature as the sole independent variable in prediction of energy demand in the subsequent 24 hours on a half hourly basis for NSW utilizing statistical models i.e., regression. Explore the predictive improvement through the addition of independent variables. Do these models provide comparable predictive results to the supplied predictions and if so under what circumstances.

**Justification of Model Selection:**

**1. From Literature Review (LR) Insights: We pick 1,2,3 models (Section 6.6)**

**2. From EDA Insights: We pick 4,5,6 models**

**3. Time constraints: We select and construct (e.g. 3) models from (LR+EDA), then pick the best model.**

## Collecting and Loading Data

## Initial Data Inspection

## Summary Statistics

## Data Visualisation

## Explore Relationships

## Outlier Detection

## Feature Engineering

## Findings

## Univariate Analysis (Marking Rubric)

## Bivariate Analysis (Marking Rubric)

## Discovery of Missing Data (Marking Rubric)

## Hidden Patterns (Marking Rubric)

## Outliers (Marking Rubric)

## Appropriate Cleaning and Wrangling of Data (Marking Rubric)

**Problem Definition and Goals:**

# Analysis and Results (Section 2: Quality of Analysis 15% ~ 8.75 pages)

## A First Model

# Discussion

# Conclusion and Further Issues