

**3rd Year Project Proposal**

**Programme:**

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| **Student Name:** | **Student Number** |
| Eoin Delaney | K00256954 |
| Vinicius Parzanini | K00263592 |
| Arnas Magilevičius | K00255824 |

**Working Title:**

The effects of weather on the power and water consumption in the college.

**Description:**

We are going to develop software that would analyse the energy and water consumed by the college over many years and relate that to the weather in the past. These findings will then be used for machine learning purposes in order to allow our software to make predictions on the energy and water consumption based on the current weather. With that, we would also document potential security issues surrounding access to the system collecting the data, and, build a web based front-end in order to more easily access the data using a Graphical User Interface (GUI).

**Reasons for selecting project:**

As data analysts we want to use a data set we wanted to use a data set where the data was collected by something that we actually have access to.

For the cyber security side, we want to show the data in a secure front-end software using good programming practices.

We felt like this project would allow us to incorporate elements of both Data Analysis and Cyber Security which drew us more towards the project as we wanted to be able to show off and also expand our knowledge of both subjects.

**Proposed research content:**

We knew a station for energy consumption existed in the college, having learned more about it, we want to process the data it’s collecting and using extrapolation and visualisation techniques, see if there is a correlation between energy consumption and the weather. The weather data we would acquire from Met.ie as seen in the link below.

**External links (if applicable):**

<https://www.met.ie/climate/available-data/historical-data>

**Hardware requirements:**

PC, electricity meter/sensor, water meter/sensor

**Software requirements:**

Python, PHP, Java, MySQL Workbench, HTML, CSS

**Other requirements:**

**Signed:** Eoin Delaney, Vinicius Parzanini, Arnas Magilevičius

**Date:**

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Approved/Not Approved: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reasons for not approving project: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Conditions attached to approving project: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of supervisor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_