**Team 1:**

Adam Schuller, Alessandro Joaboar, Bogdan Constantinescu, Bryan Duff

| **Team Member** | **Role** |
| --- | --- |
| Adam Schuller | Tester/Analyst |
| Alessandro Joabar | Architect |
| Bogdan Constantinescu | Project Lead |
| Bryan Duff | Engineer |

**Overview:**

We will analyze the characteristics of over a thousand laptops to determine the best model to purchase for different applications. Our proposed approach is to rank the features of laptops that govern performance, such as CPU, GPU, RAM, and memory. We will also source an outside dataset containing benchmark performance scores so we can convert each of the different hardware components into a numerical ranking. We also propose to cluster laptops to show that those with a high price/performance ratio would be less ideal than laptops with low price/performance ratio.

We will also try to cluster the different laptop parts in order to determine the best models for different applications (such as school, photography, film, engineering law, etc.). We believe we will be able to make effective recommendations for these applications, depending on potential customers’ budgets and needs, from the insights that we find.

**Tasks:**

Cleaning and Transforming the data:

* CPU and GPU estimated rankings
* Clean up string data in fields (‘kg’, Hz, GB, etc)
* Divide screen size into width and height
* Create driver for clustering (remove brand names, models, etc)

Building and Fitting the models:

* Finding new learnings
* Identify clusters/categories

Results Analysis and Predictions:

* Final whitepaper with all plots and charts

Recommendations and Exec Summary

**Data:**

*Dataset:*

Laptop Prices Dataset from Kaggle: <https://www.kaggle.com/ionaskel/laptop-prices>

*Columns:*

* Company (20 unique manufacturers)
* Product (578 unique models)
* Type name
  + 2 in 1 Convertible
  + Ultrabook
  + Netbook
  + Notebook
  + Gaming
  + Workstation
* Inches (range 10.1 to 18.4 screen size)
* Screen (42 classifications of resolution)
* CPUs (118 distinct models, maybe 6-12 actual CPUs )
* RAM (10 categories, from 4GB to 64GB)
* Memory (41 categories of disk space, from 32GB to 2TB)
* GPUs (104 distinct models, 6-12 actual GPUs)
* OpSys (operating systems)
* Weight (range from 0.69 kg to 4kg)
* Price (range from 174 to 6099 euros)