# DigiFab/ FONS Datathon 2021

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## **Data Preparation**

#### All descriptors were used:

- 1. Drop all Columns with more than 60% missing Value
- 2. Replace all missing Values with the median of the column
- 3. Deal with Outliers:
  - a. Compute 5% and 95% quantile
  - b. Cap all data below or above to those value
- 4. Drop all Identifiers
- 5. Normalise Data

### Method

- 1. Split Dataset into Train and Test set (80/20)
- 2. Test many algorithms on the Data => Random Forest won everywhere
- 3. Optimise Parameters of RandomForest
- 4. Calculate predictions on Test set

### Adjustment in Task 4 & Bonus 2

- For both tasks the target showed high values
- Models work best on small values
- Thus the data was scaled down.
- Predictions were scaled up and submitted

# Thank You

## Results

	Mean Abs Error	Accuracy	R <sup>2</sup>
Task 1	0.047		0.945
Task 2		0.842	
Task 3	0.242		0.862
Task 4	3.806		0.447
Bonus 1	0.019		0.469
Bonus 2	272.1		0.277

