Using Random Fourier Features with Random Forests

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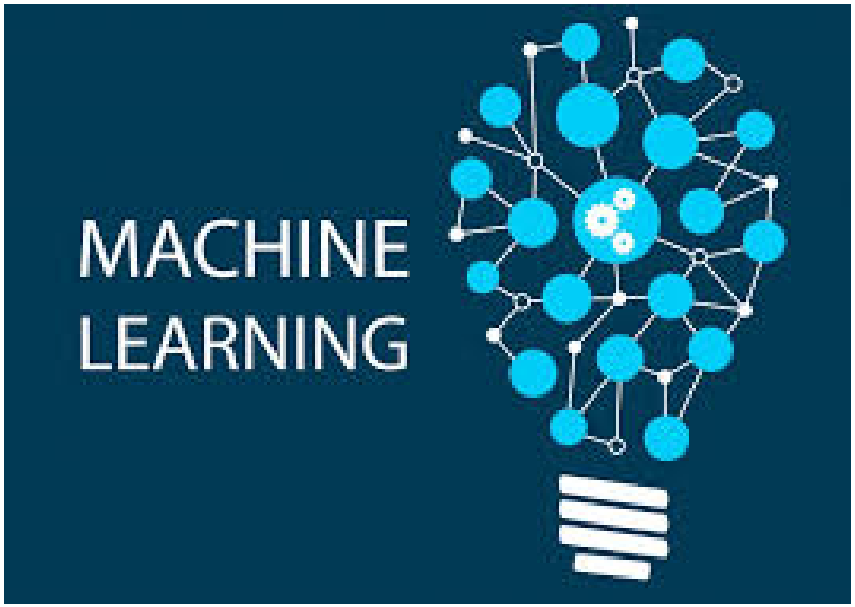
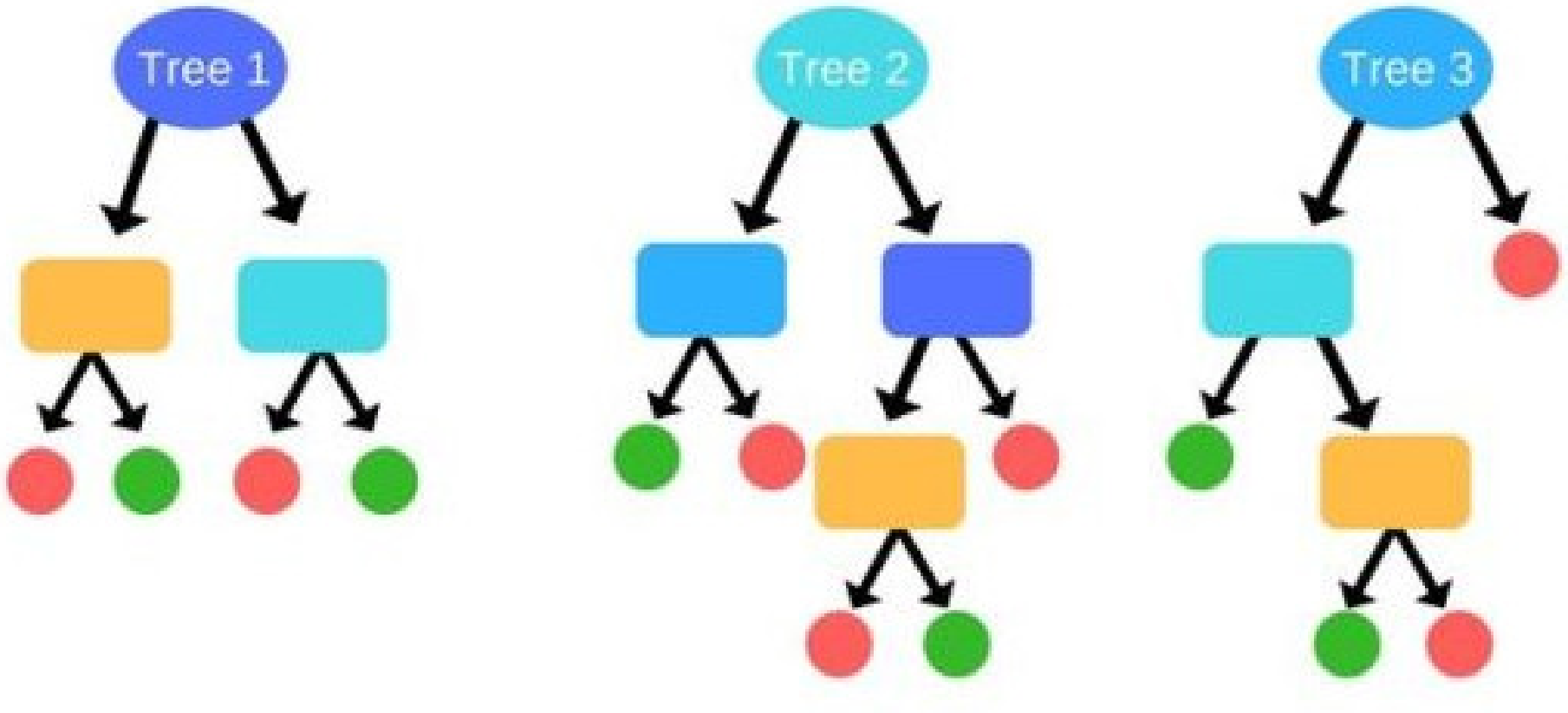
Context



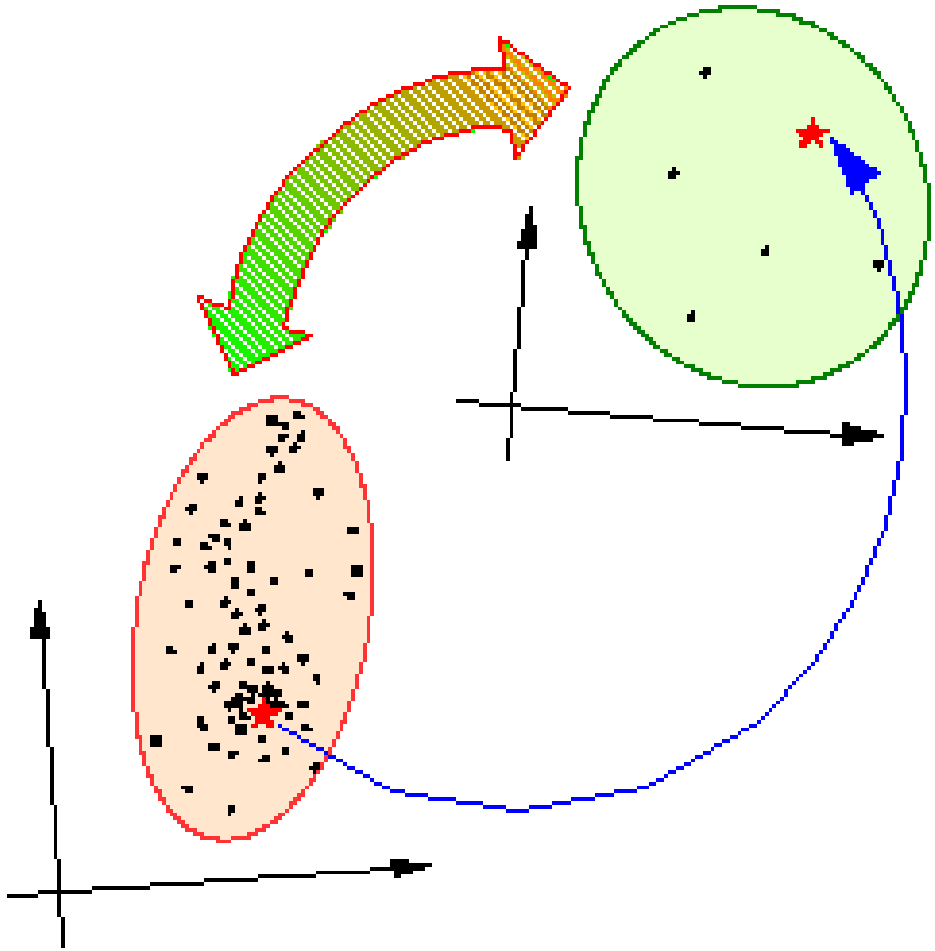
Context

Random Forest



Context

Random Fourier Features



Scope

One mapping per forest

First generate one mapping and then use original Random Forest algorithm with the new data

One mapping per tree

Generate one mapping for each of the trees, and build and train them with the original tree-building algorithm

One mapping per node

Generate a mapping in each split step during the tree building

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Planning

Theoretical Approach

- Study Random Forest Algorithm
- Study Random Fourier Features Mapping
- Study the way to mix them

Algorithm Implementation

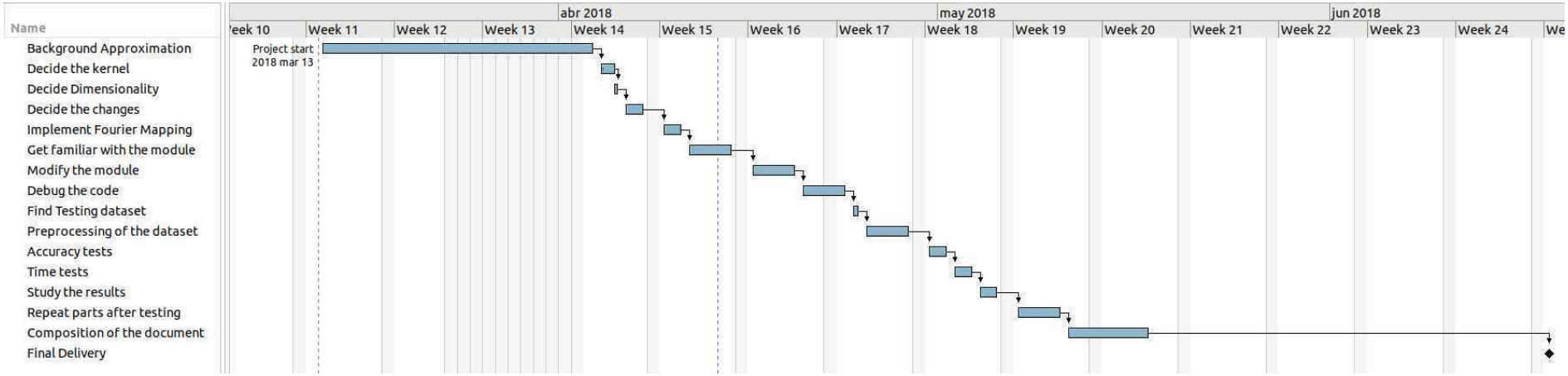
- Code for the mapping
- Modifications to the Random Forest Algorithm

Testing

- Time and accuracy tests

Planning

Workflow



Budget

Roles

- Expert in Machine Learning
- Programmer
- Tester

- Labour cost: 240 hours of work $\cdot \frac{30\ €}{1\ \text{hour}} = 7200\ €$
- Indirect Costs: Transport (150 €)
- Depreciation: Laptop (25.6 €)

Total cost

7375.6 €

Sustainability