

Rolls-Royce@NTU Corporate Lab

NATIONAL RESEARCH FOUNDATION

PRIME MINISTER'S OFFICE

Al for Smart **Discovery**

Vision: Enabling users to translate data to new insights at pace

Our Motivation



Big Data

Data are churn out regularly and there is a need to utilise them to derive insights



Hypothesis

There are many hypotheses to explore in every problem



Knowledge

There are limited data scientists available and a large variety of in-depth analytics techniques to learn

Why Smart Discovery



Requires No Coding

User-friendly interface with technical complexity hidden



Requires No Extensive Training

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Simplified data science workflow done
by leveraging on best practises by leveraging on best practises



Requires No Data Science Knowledge

Codified knowledge from data scientist and made it easy to understand

Smart Discovery's Core DNA



Data Exploratory

Enable users to discover new patterns which will lead to new findings



Descriptive Analytics

Reveals meaningful insights to validate hypothesis and address business issues



ிய் , Predictive Modelling

Generates easy to understand outcomes that users can use for future predictions

Benefits

- · Gain new insights
- **Identify potential causes**
- Predict future values

Early Success

- **Engine Investigation**
 - Engine vibration: Potential caused on engine vibration was identified
- Implement new error reporting system
- Reduce testing failure rates
- Avoid cost of millions of dollars

Use Case

- Engine Manufacturing
- Engine Health Monitoring
- **Engine Assembly & Testing**
- Other domain & industries