Sharing and Projects

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IEEE Student Branch

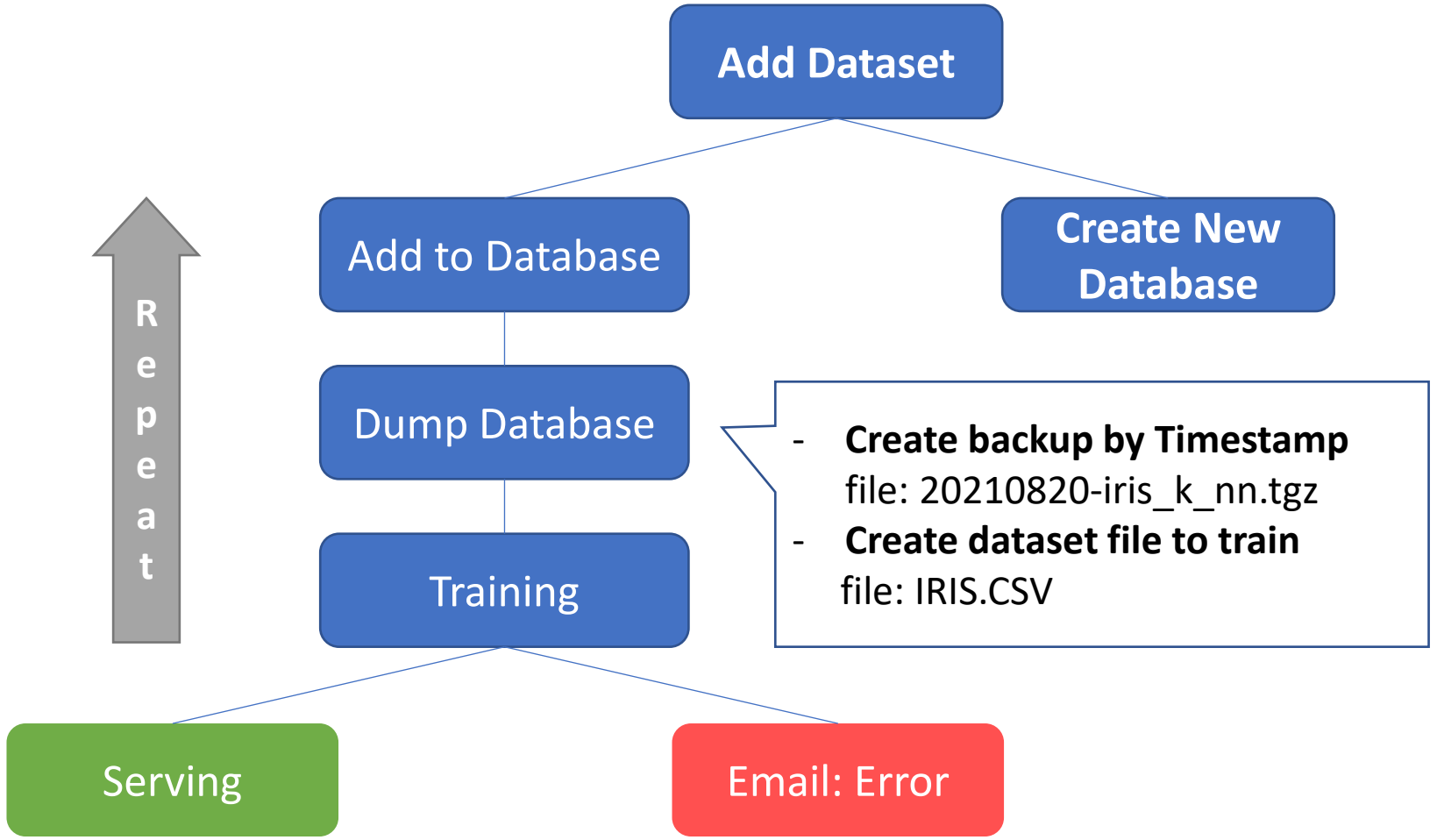
Review

Machine Learning Concept

- A computer program is said to **learn from experience E** with **respect to some task T** and **some performance measure P**, if it's performance on T, as measured by P, improves with experience E.
- **Linier Regression (Advertising and Sales)**
  - **E**: Sales in data training
  - **T**: Predict the Sales based on Advertising spent
  - **P**: Iteration, Learning rate, Accuracy, RMSE, R^2, and Residual
- **K-NN (Iris Classification)**
  - **E**: Labeled Iris data in data training
  - **T**: Classify the Iris data based on feature (petal length/width, sepal length/width)
  - **P**: k (number of neighbor), Accuracy

Case in Industry

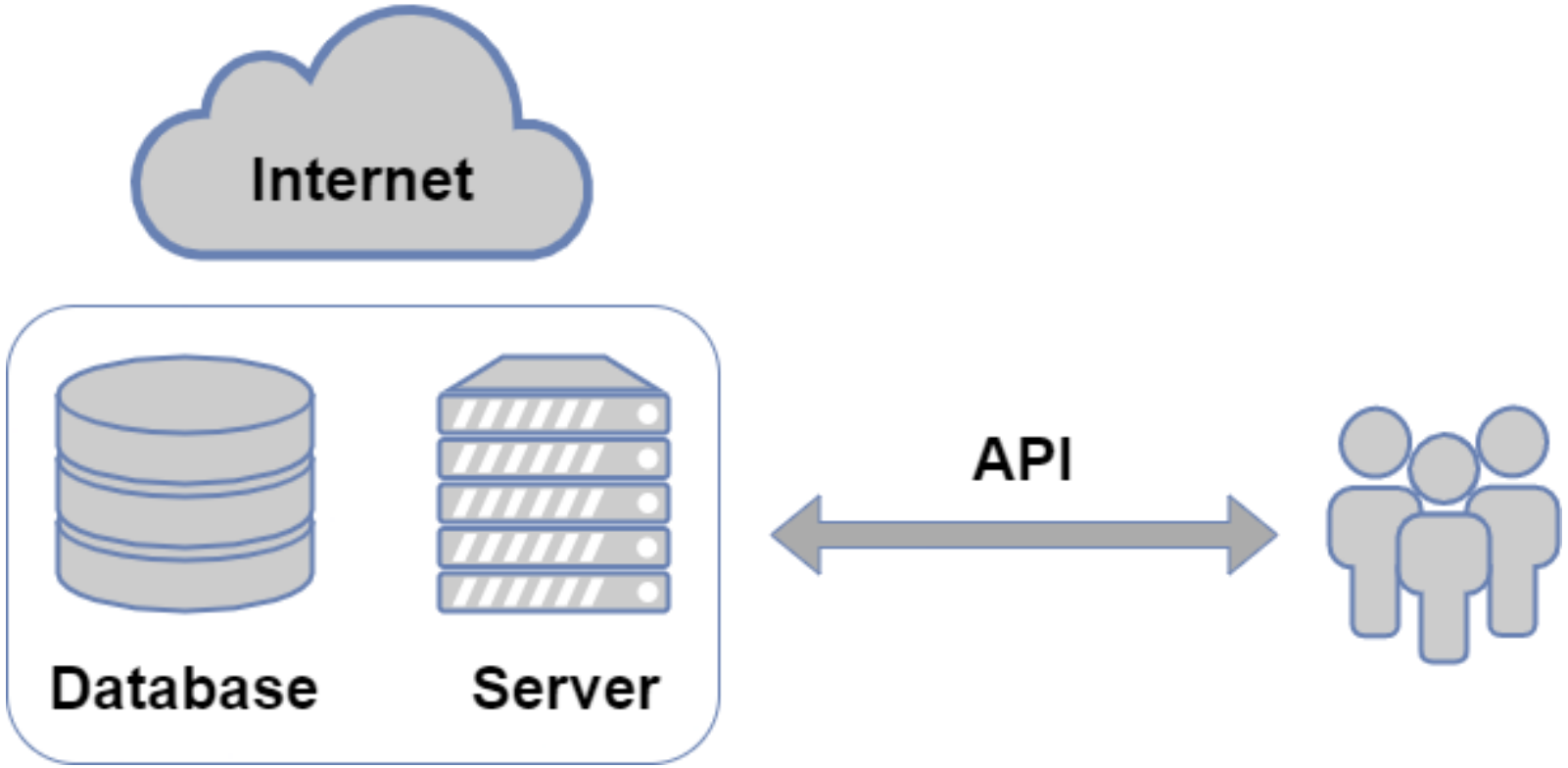
Pipeline



Tools:

Apache Airflow

Serving



Simulate the Serving Process by Convert from Notebook into Real Project

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Create Training Script

- Setup empty virtualenv
- Prepare the data
- Train the data
- Save the model as “Pickle”
- Measure the model score
- Try to predict the data testing

Create Serving Script

- Continue work with current virtualenv
- Load the model in the form of “Pickle”
- Setup the API with flask with the “Class”
  - Load the data testing variable
    - To load the data from the **HTTP request**
  - Calculate the model score
  - Predict the data testing from HTTP request
  - Setup the **dictionary** and convert into **json**
  - Create **log** with json format

Run the Project

- Run the project from CMD
- Access the URL from Postman

Work in AI Industry

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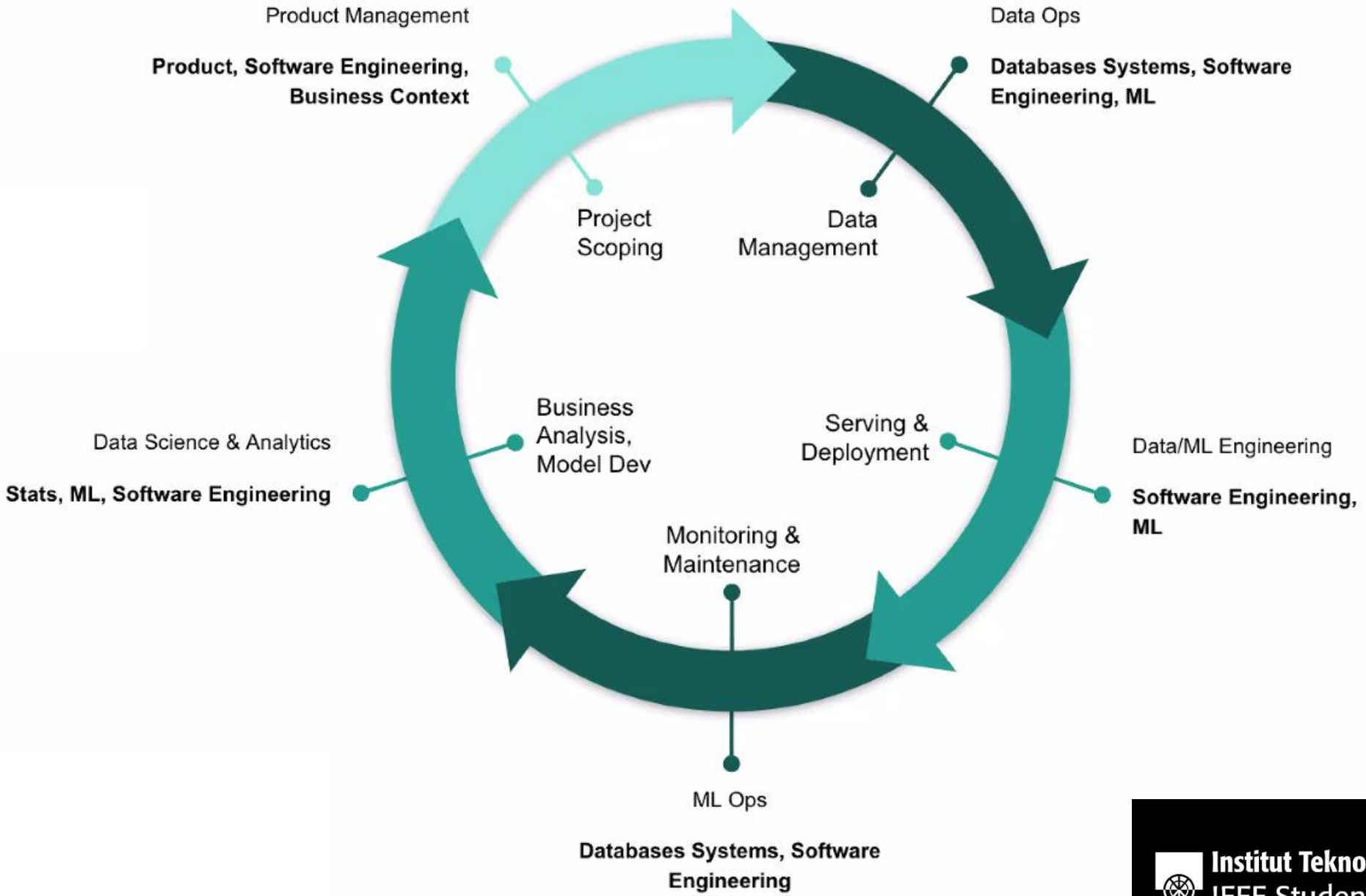
Product Management
Product, Software Engineering, Business Context
Data Ops
Databases Systems, Software Engineering, ML
Project Scoping
Data Management
Business Analysis, Model Dev
Serving & Deployment
Data Science & Analytics
Stats, ML, Software Engineering
Data/ML Engineering
Software Engineering, ML
Monitoring & Maintenance
ML Ops
Databases Systems, Software Engineering