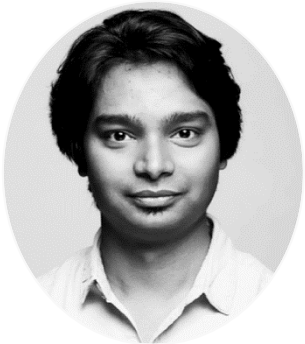# Saving and Loading Machine Learning Model

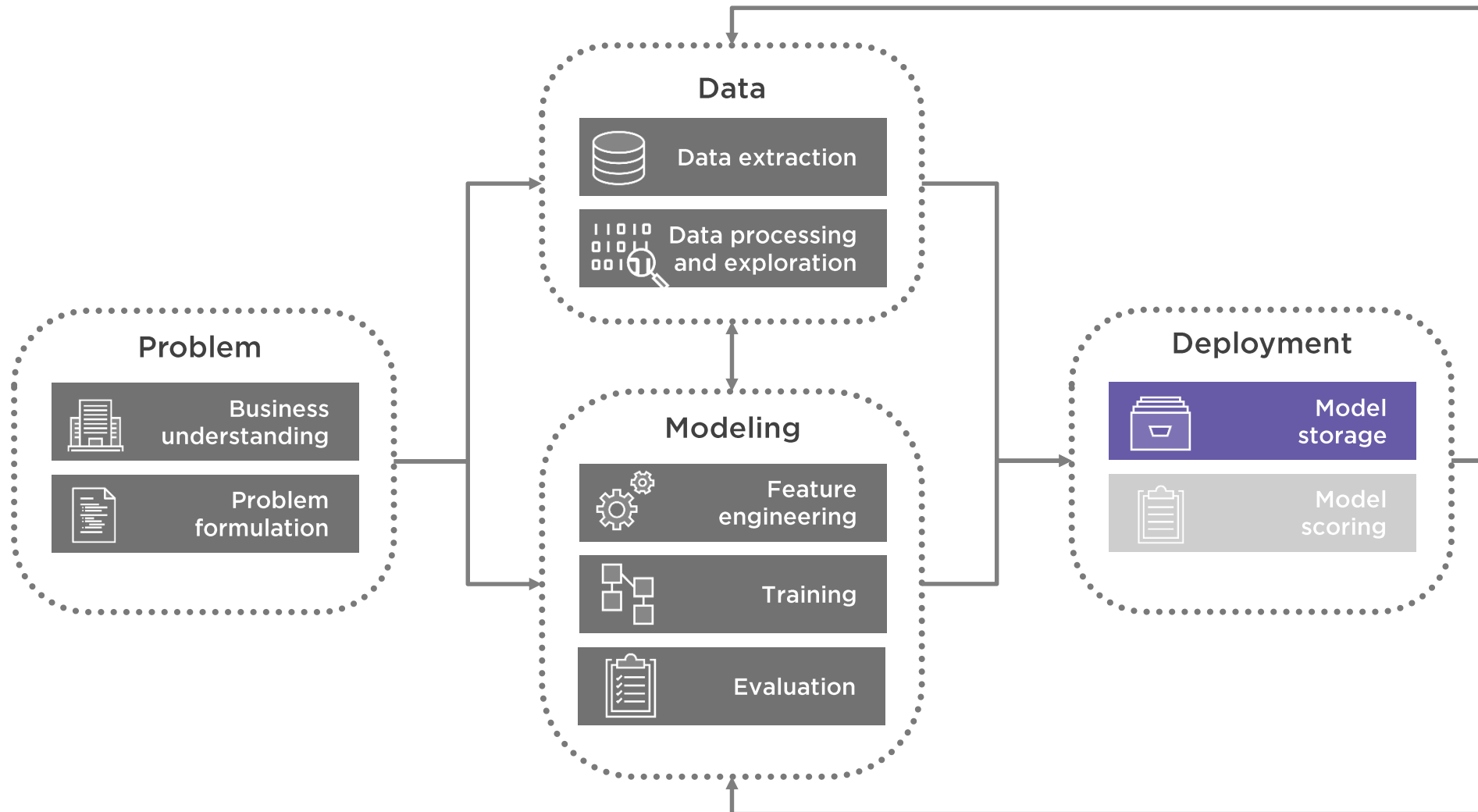**Abhishek Kumar**
DATA SCIENTIST | AUTHOR | SPEAKER

@meabhishekkumar

Machine Learning Workflow

Overview

Model export options

Export model

Load model

Model Export Options

Browser

Local storage, IndexedDB

Download

Download model files locally

Server

Upload model files to HTTP server

Browser Based Options

Local storage	IndexedDB
Key-value store	Key-value store
No expiration date unless cleared	No expiration date unless cleared
Store as string	Store as object
Useful for smaller model (<10MB)	Useful for larger model

```
const modelID = "mode_name";

const modelPath = `localstorage://${modelID}`;

// `indexeddb://${modelID}` : Use IndexedDB

// `downloads://${modelID}` : Download locally

const saveModelResults = await model.save(modelPath);

// model.json, model.weights.bin
```

Export Model

Save method

Demo

Exporting trained model

```javascript
const modelPath = `localstorage://${MODEL_ID}`;

const models = await tf.io.listModels();

if (models[modelPath]) {

    const model_loaded = await tf.loadLayersModel(modelPath);


}
```

Load Model

Use tf.loadLayersModel to load model created with layers API

```
const modelUrl = 'https://storage.googleapis.com/tfjs-
models/savedmodel/mobilenet_v2_1.0_224/model.json';


const model = await tf.loadGraphModel(modelUrl);
```

Load Model

Use tf.loadGraphModel to load graph model

Demo

Loading trained TensorFlow.js model

Summary

Model export options

- Local storage
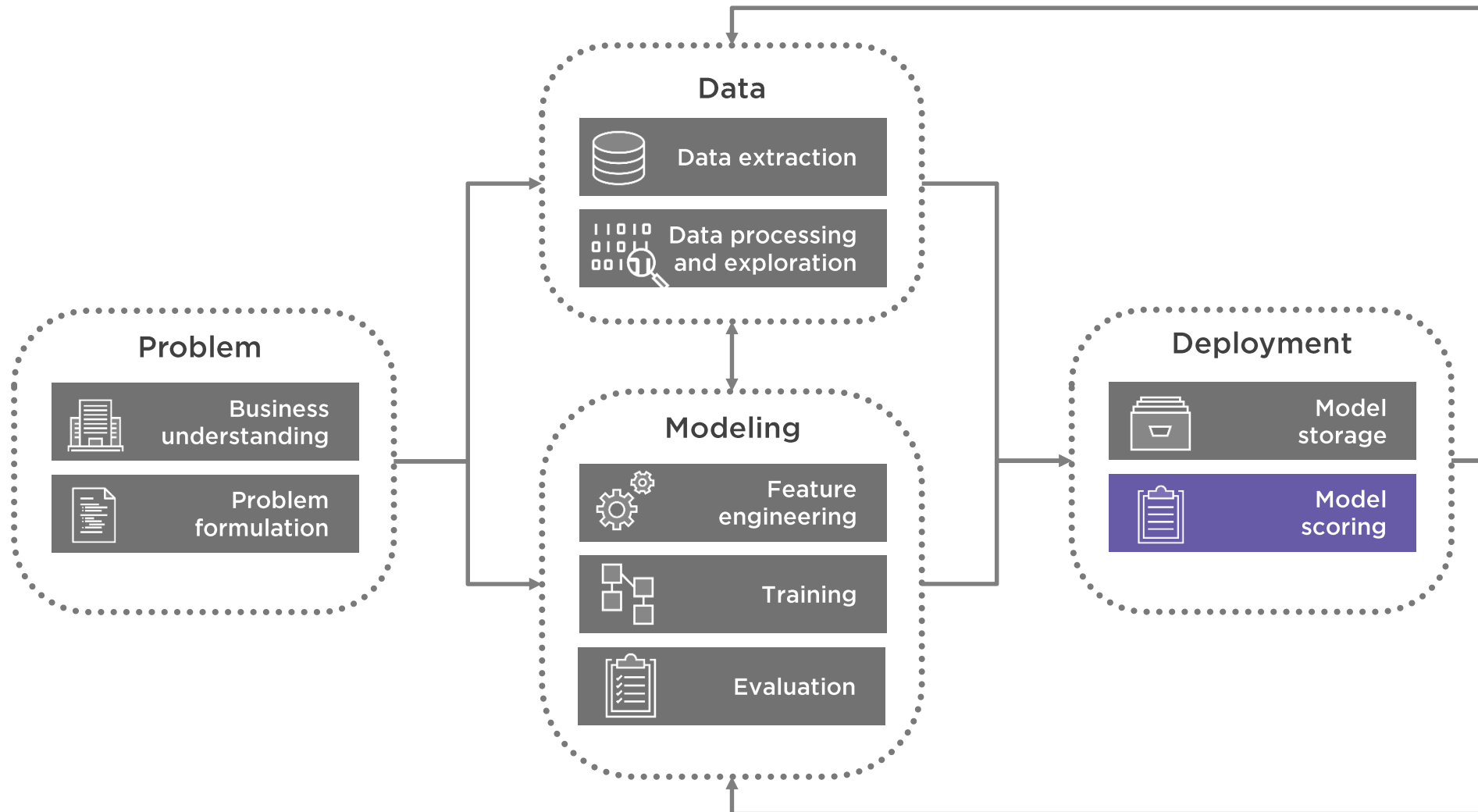
- IndexedDB

- Download

- HTTP upload

Use model.save to export model

- Topology

- Weights

Use tf.loadLayersModel to load model

Machine Learning Workflow

Data

Data extraction

Data processing and exploration

Problem

Business understanding

Problem formulation

Modeling

Feature engineering

Training

Evaluation

Deployment

Model storage

Model scoring

Up Next: Predicting Using Trained Machine Learning Model