

Summary



Jerry Kurata

CONSULTANT

@jerrykur www.insteptech.com



Key Points

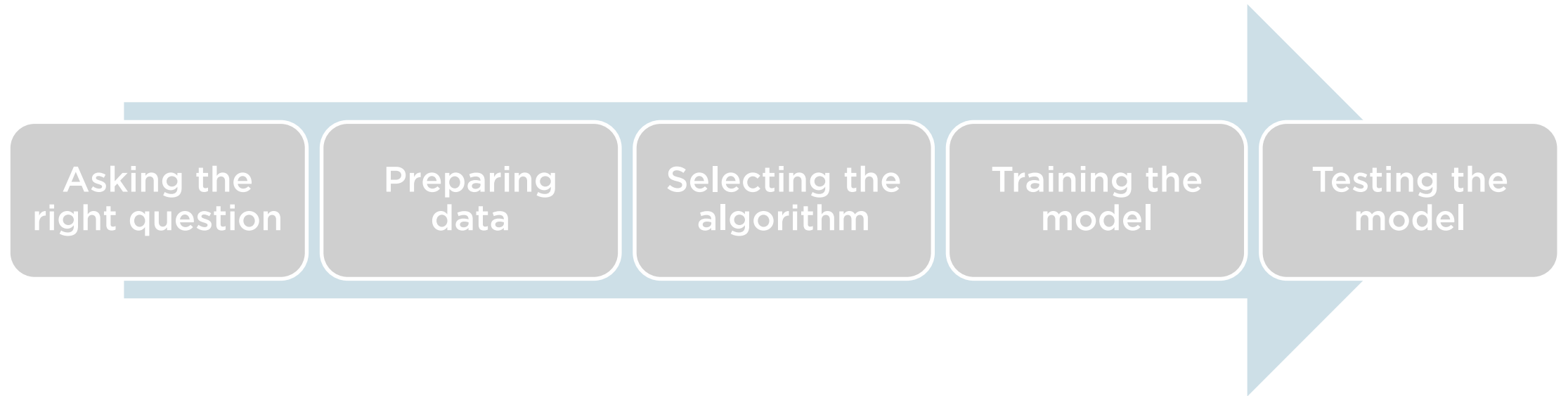
**Machine Learning
is here today**

**Machine Learning
is data driven**

**Follow the
Machine Learning
Workflow**



Machine Learning Workflow



```
graph LR; A[Asking the right question] --> B[Preparing data]; B --> C[Selecting the algorithm]; C --> D[Training the model]; D --> E[Testing the model];
```

**Asking the
right question**

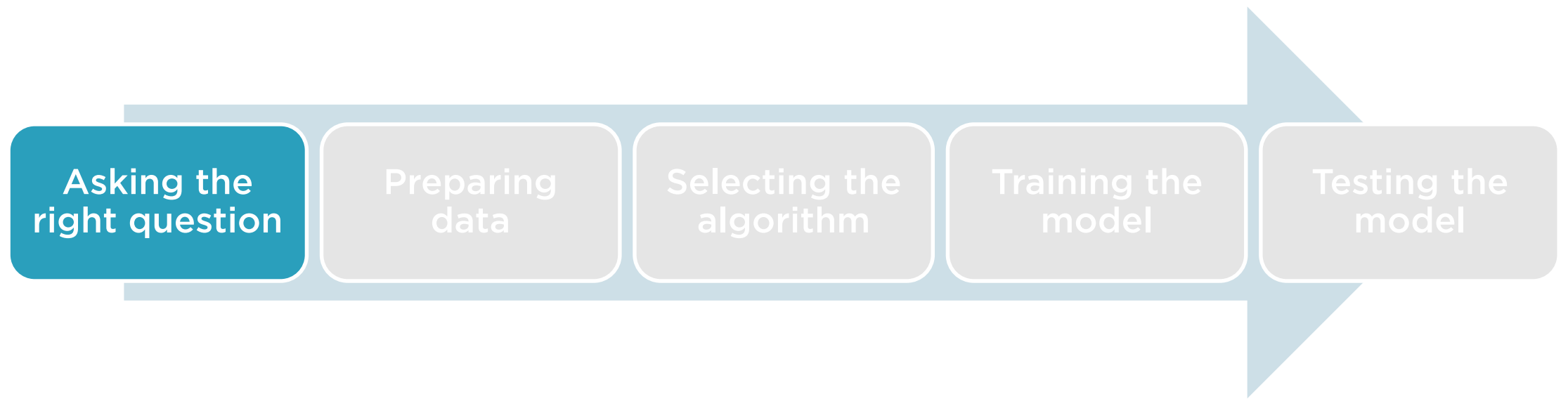
Preparing
data

Selecting the
algorithm

Training the
model

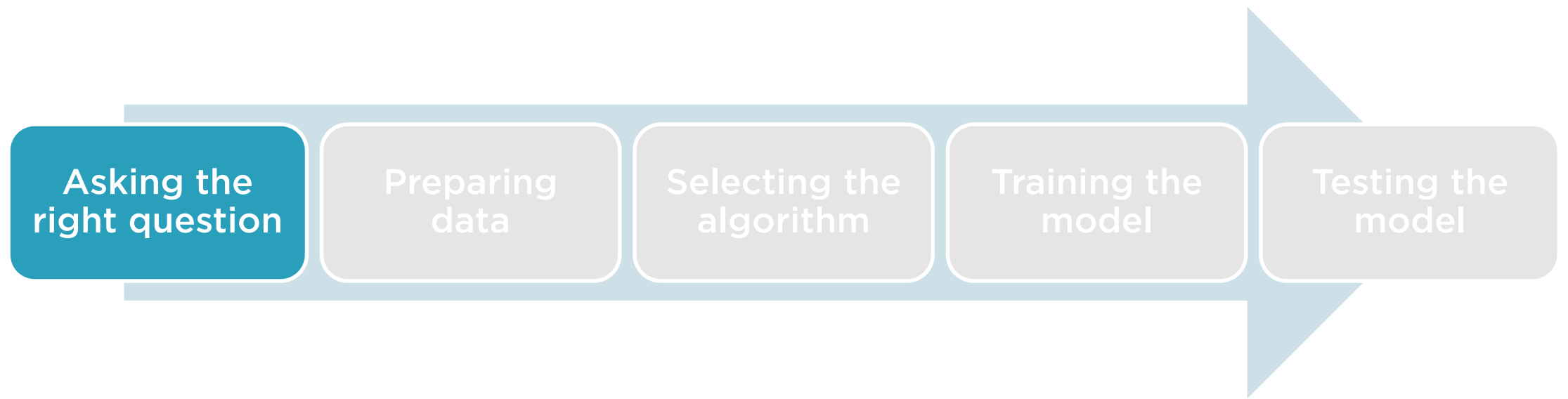
Testing the
model





Started with question

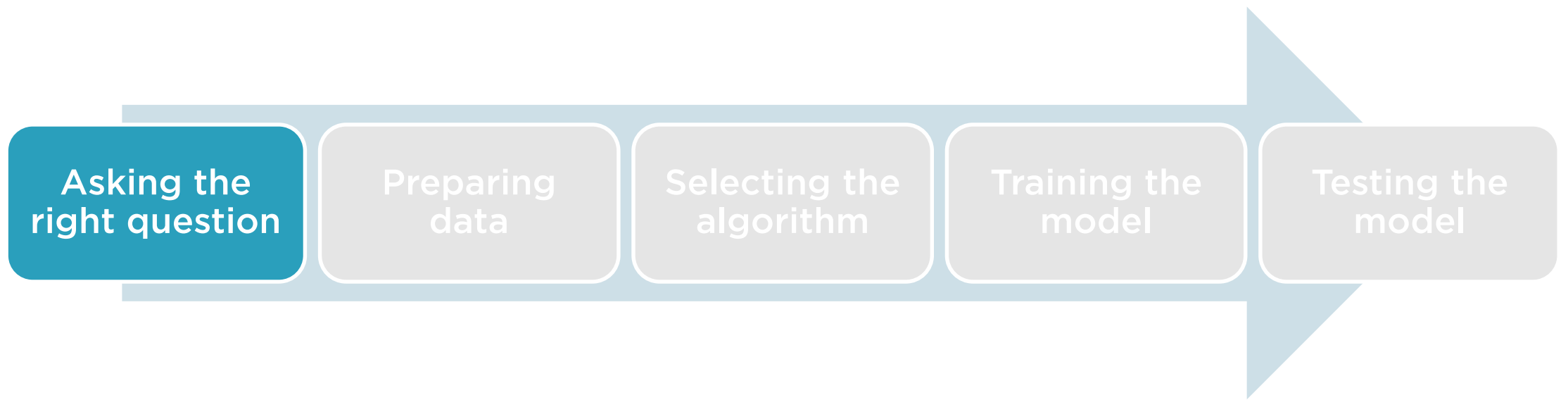




Started with question

Used requirements and knowledge to transform



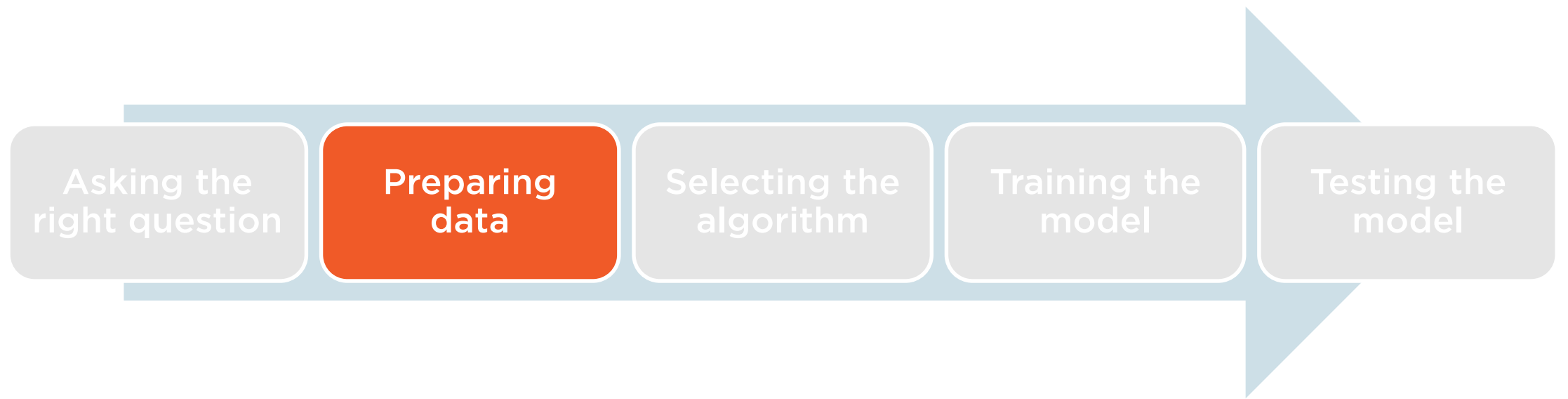


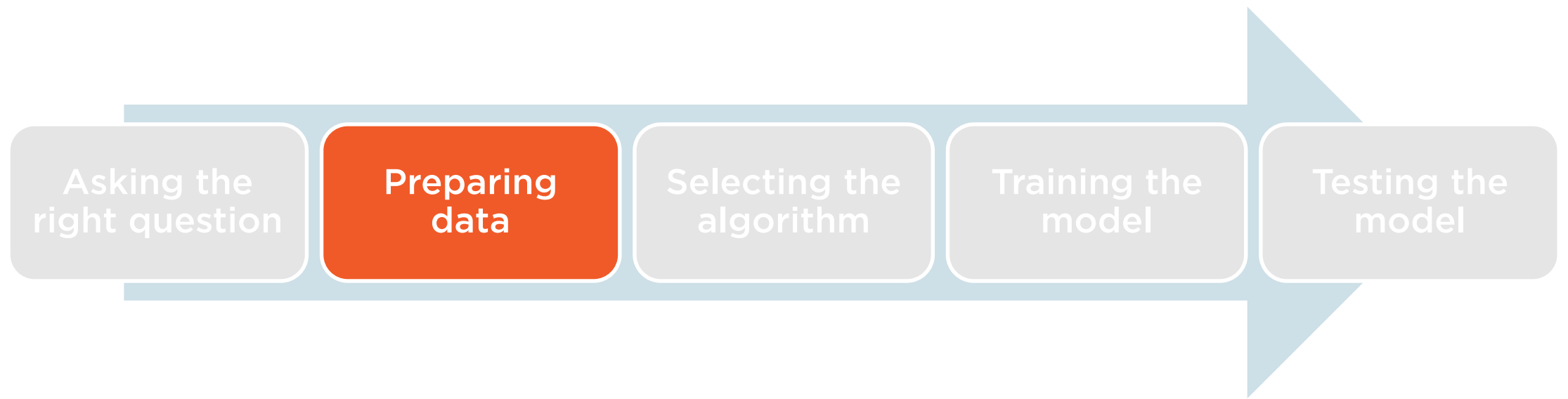
Started with question

Used requirements and knowledge to transform

Resulted in solution statement

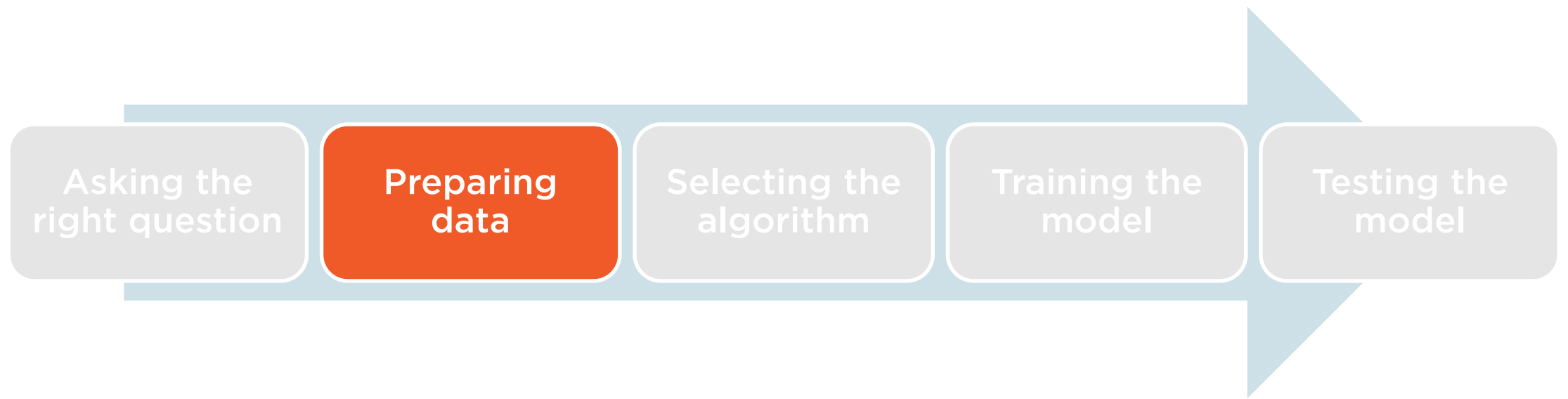






Retrieved data from DOT site

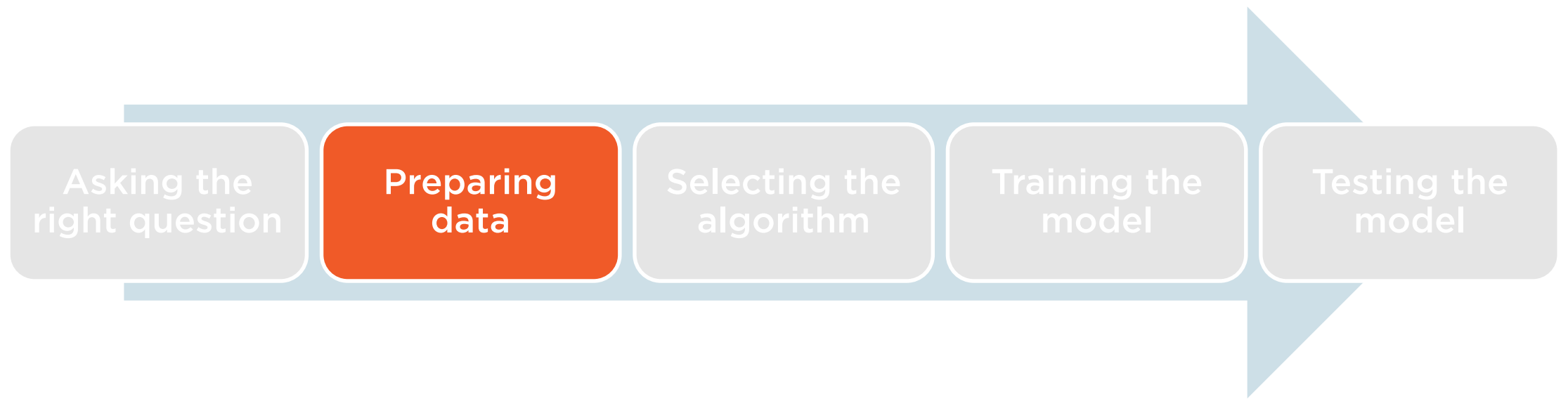




Retrieved data from DOT site

Cleaned data

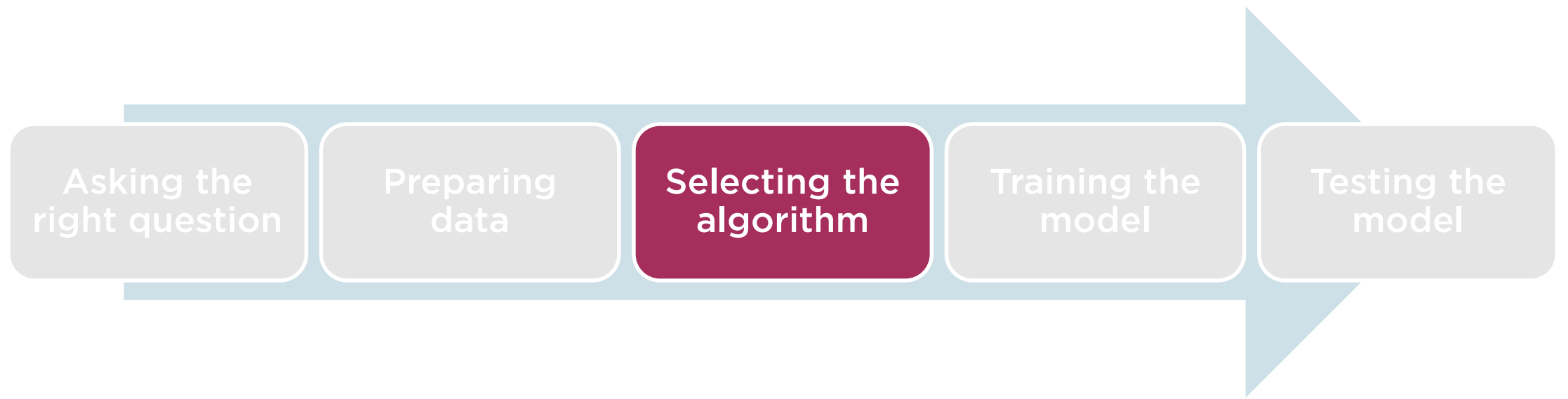


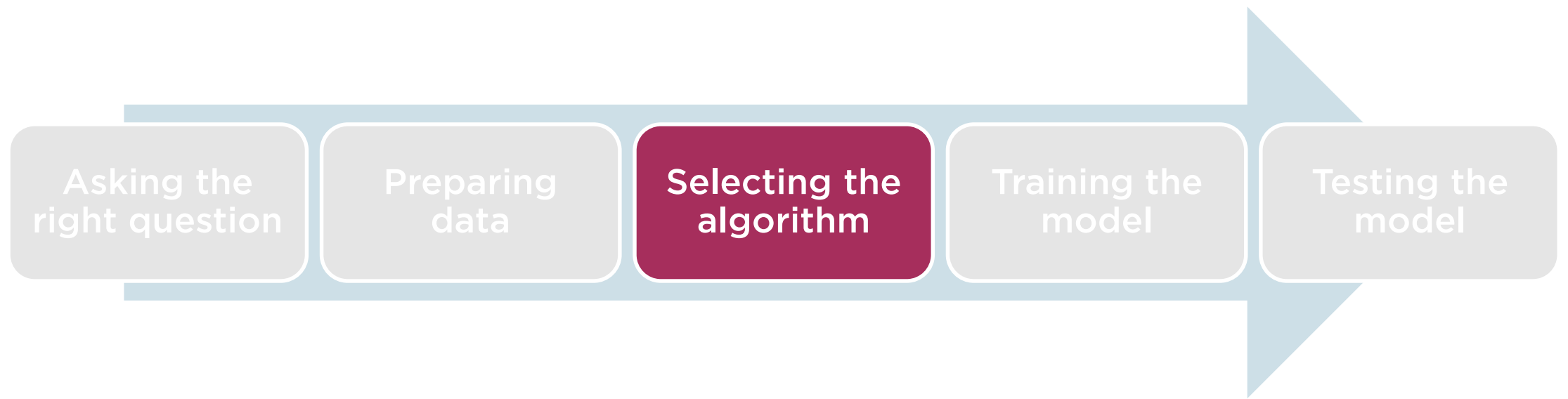


Retrieved data from DOT site

Cleaned data

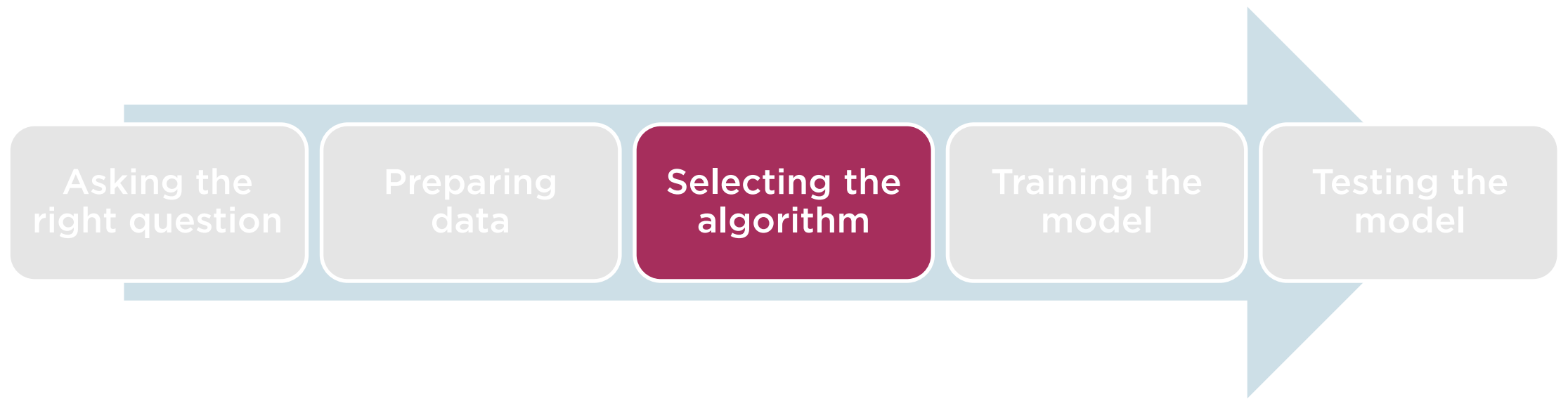
Molded data





Learning type

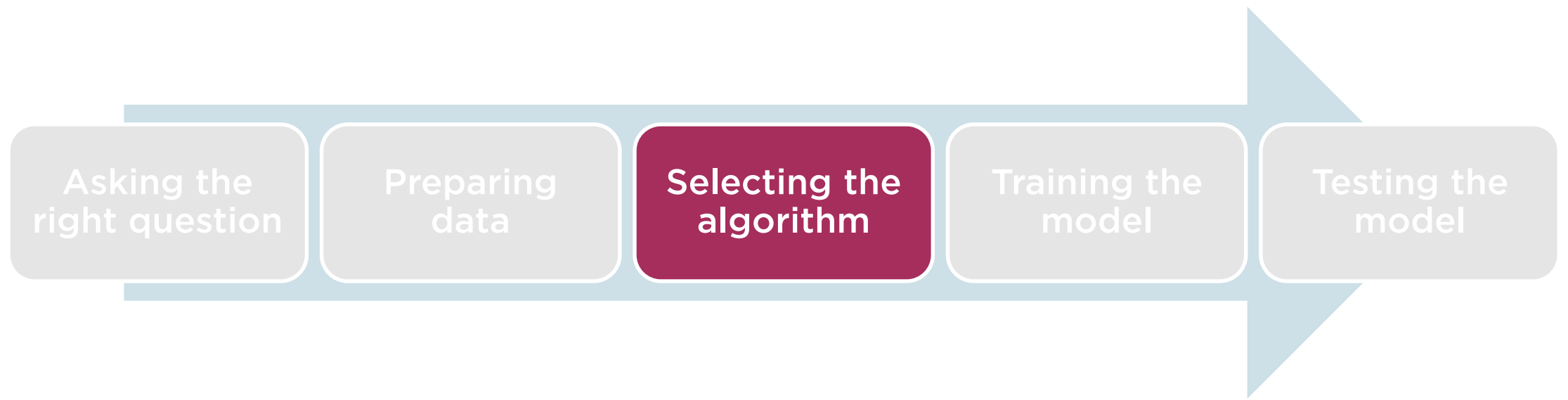




Learning type

Result type



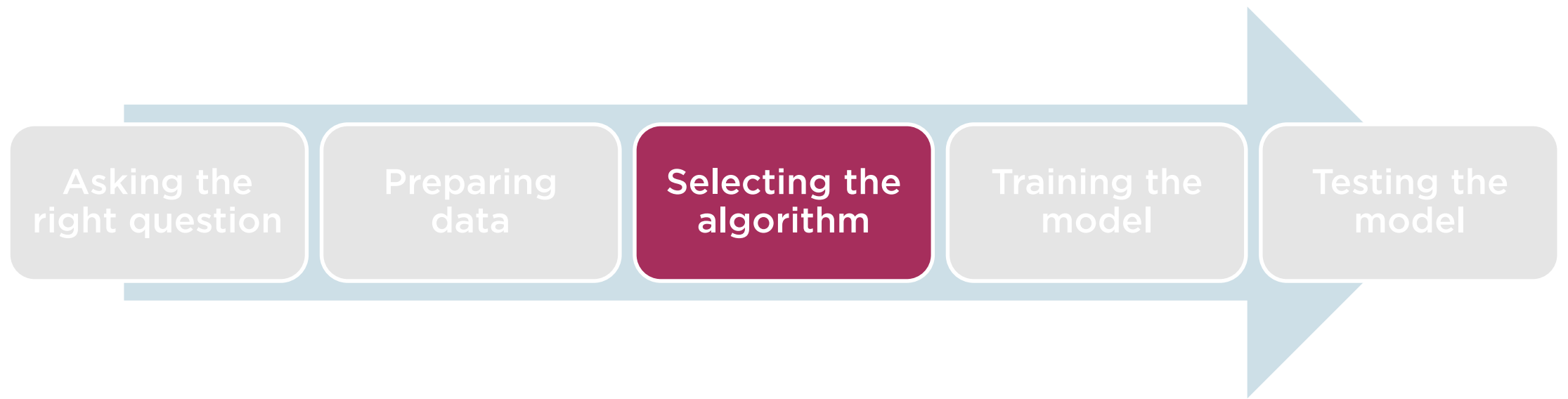


Learning type

Result type

Complexity



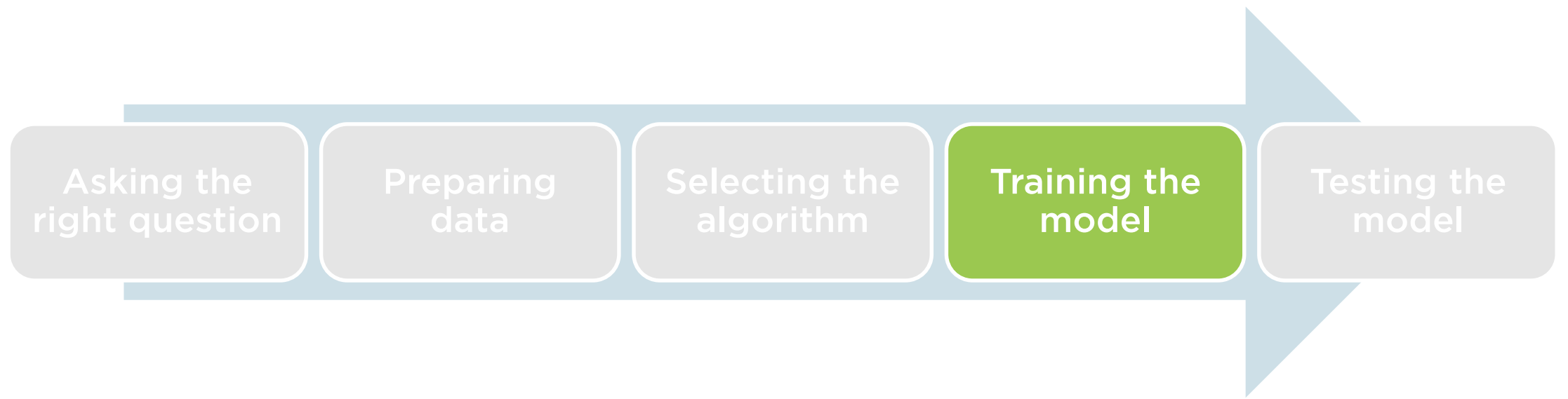


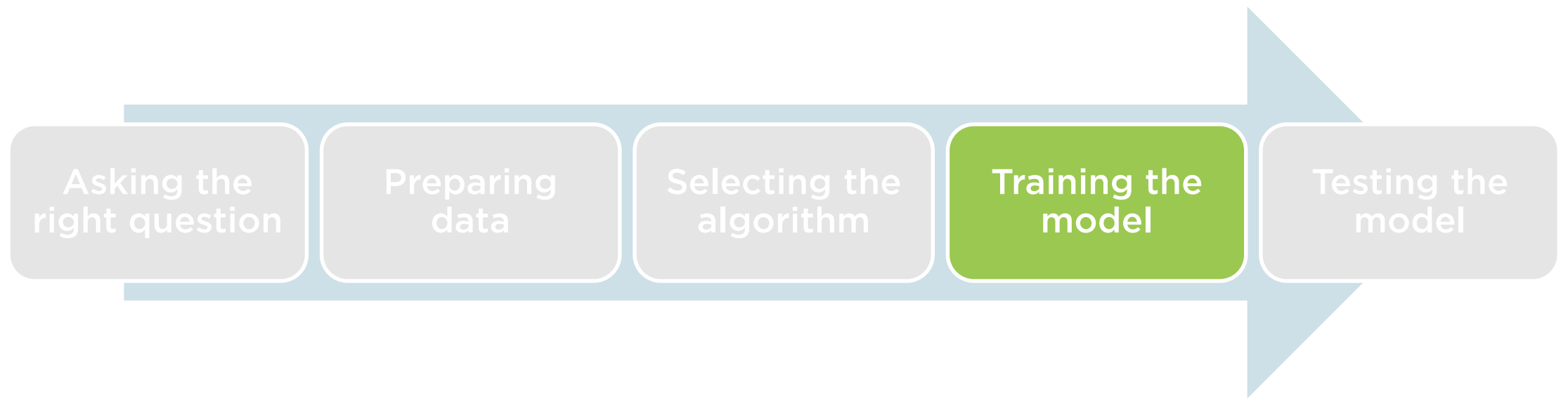
Learning type

Result type

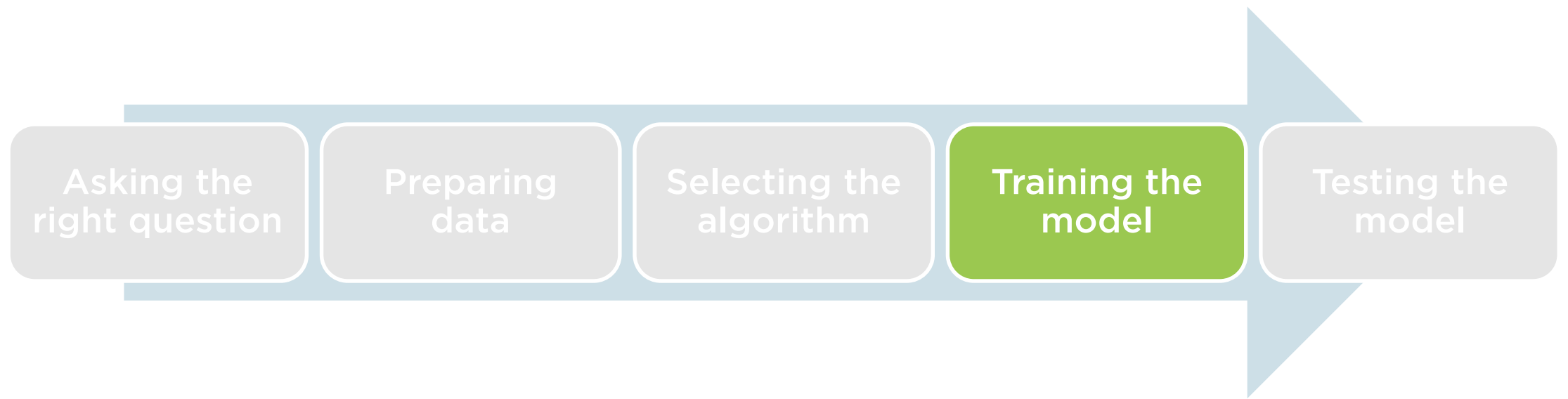
Complexity

Basic vs. Enhanced





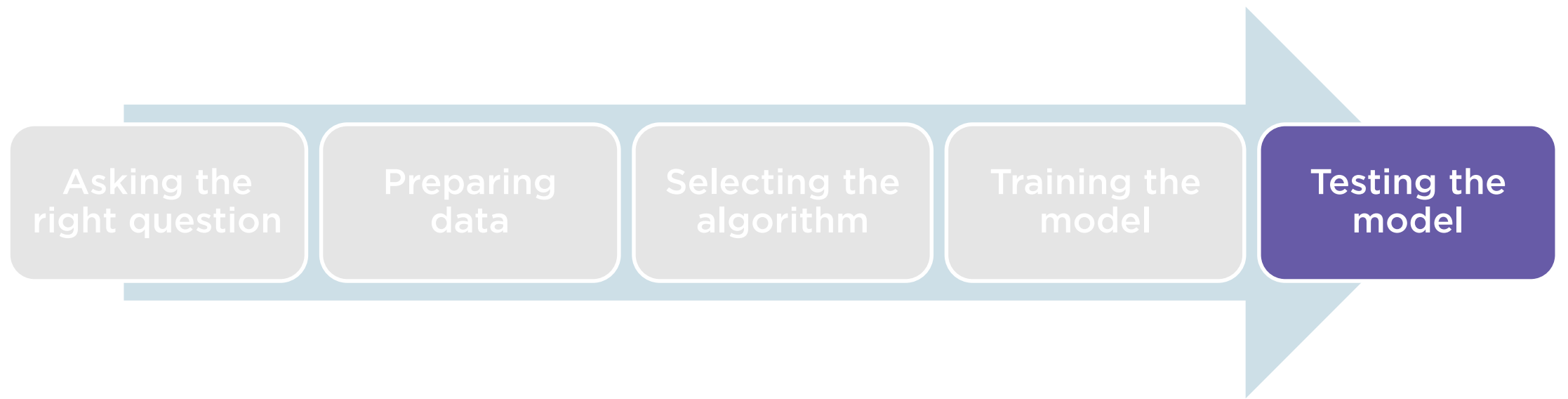
Split data - 70% / 30%

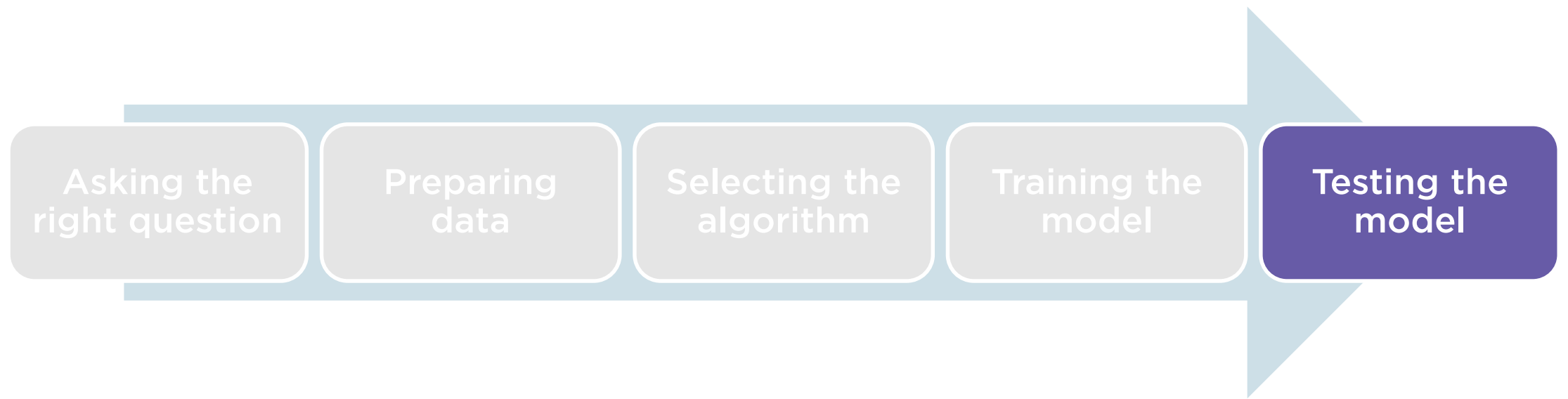


Split data - 70% / 30%

Trained with training data

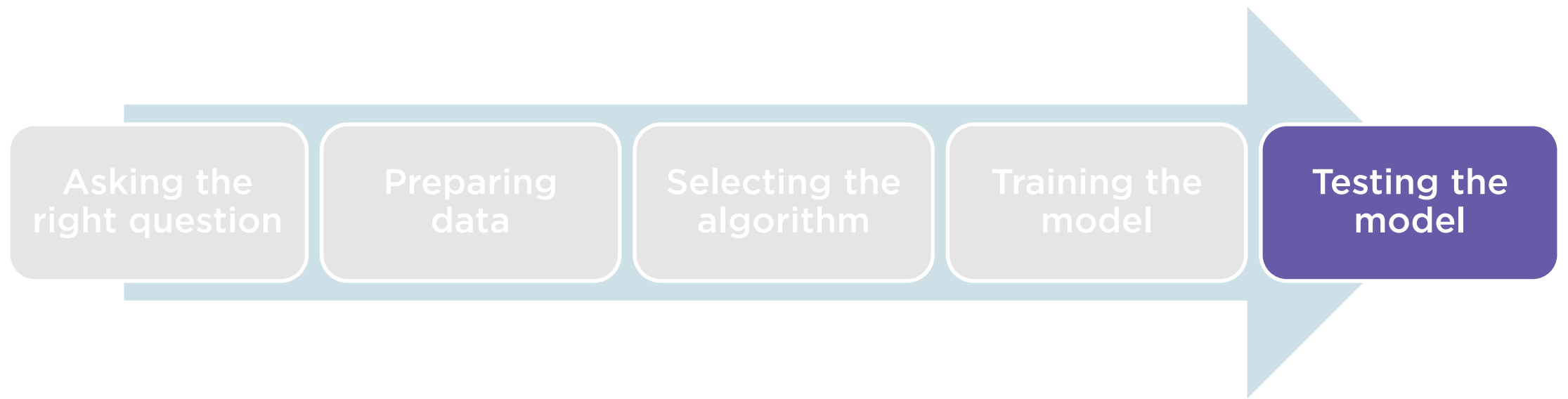






Predicted with test data

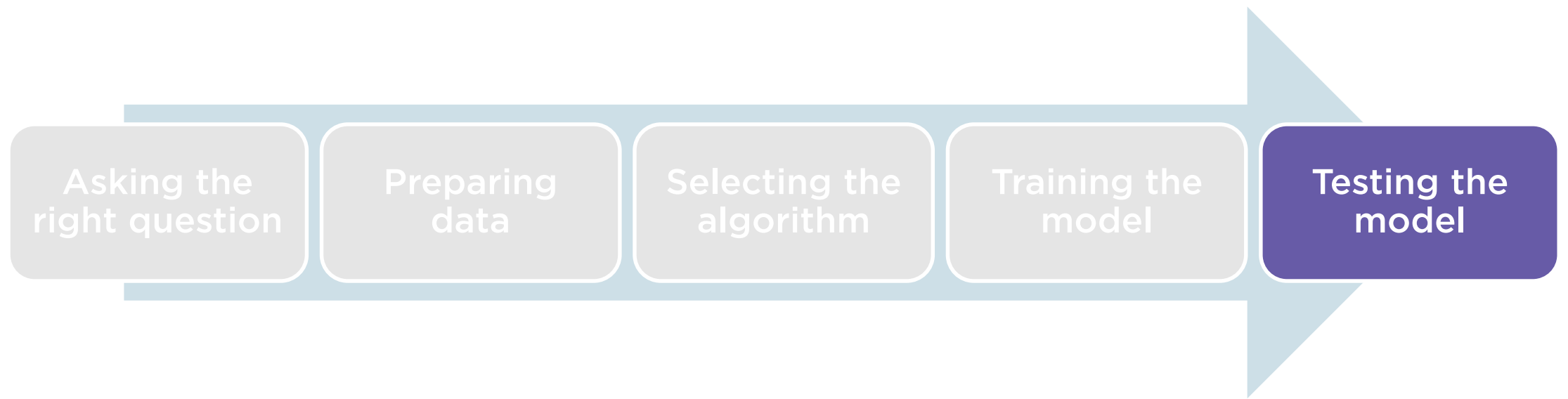




Predicted with test data

Evaluated prediction



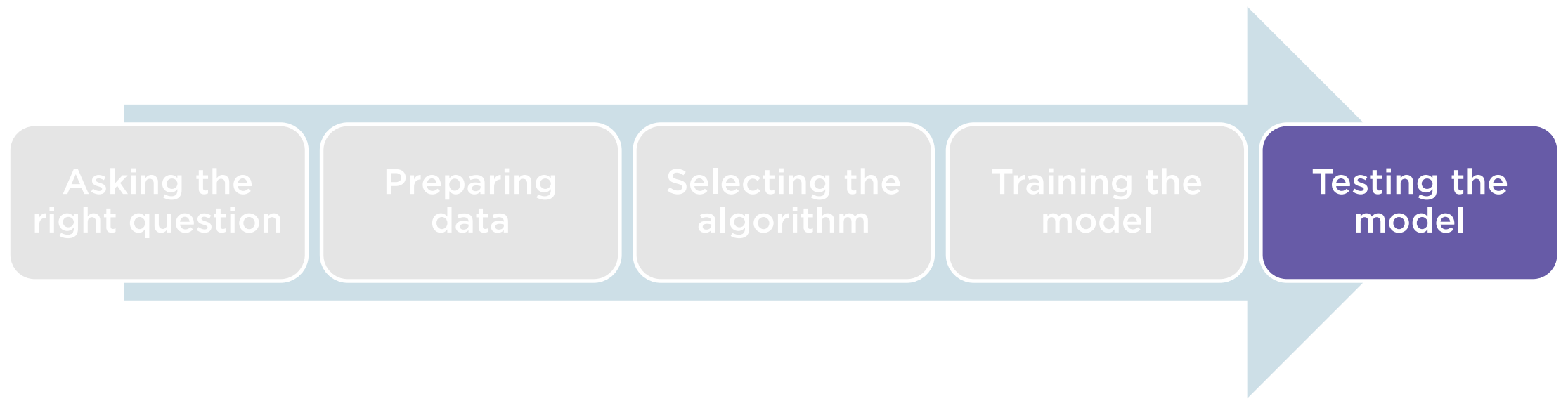


Predicted with test data

Evaluated prediction

Switched to Random Forest





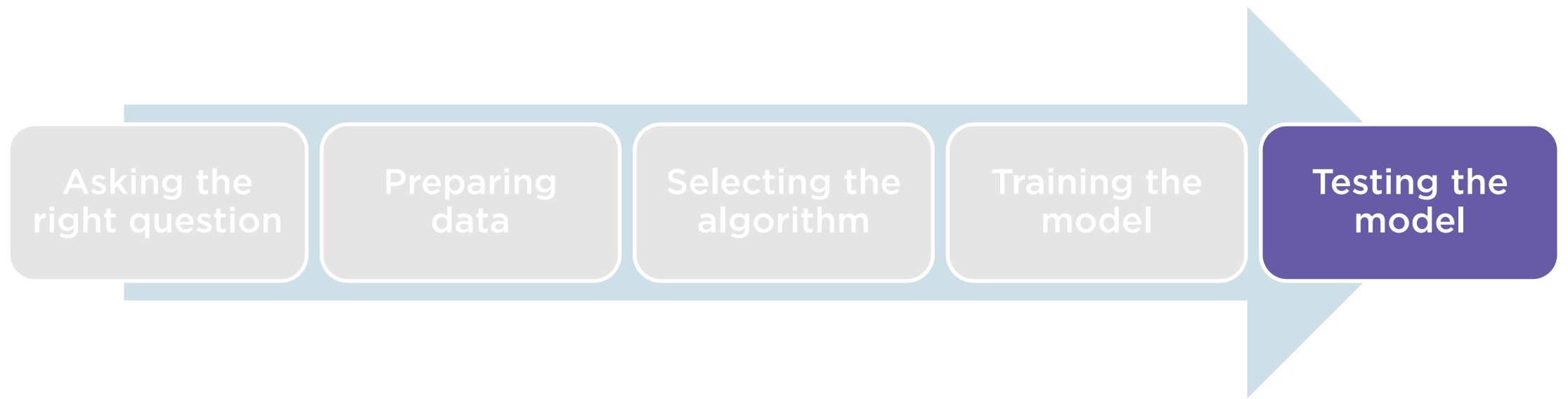
Predicted with test data

Evaluated prediction

Switched to Random Forest

Evaluated Random Forest





Predicted with test data

Evaluated prediction

Switched to Random Forest

Evaluated Random Forest

Considered adding weather data



Pluralsight Courses

R Programming Fundamentals

RStudio: Getting Started



Online Resources

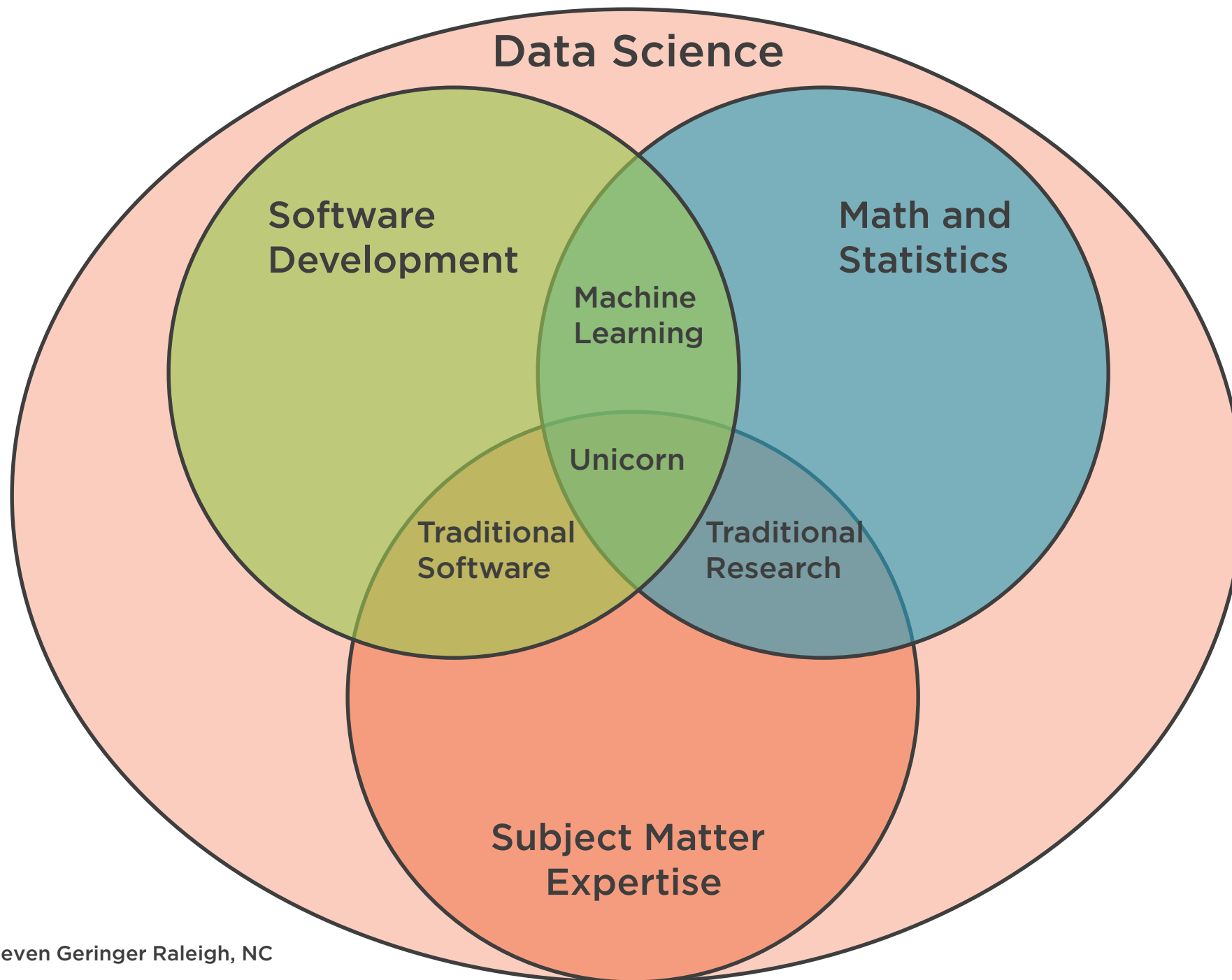
CRAN Project

cran.r-project.org

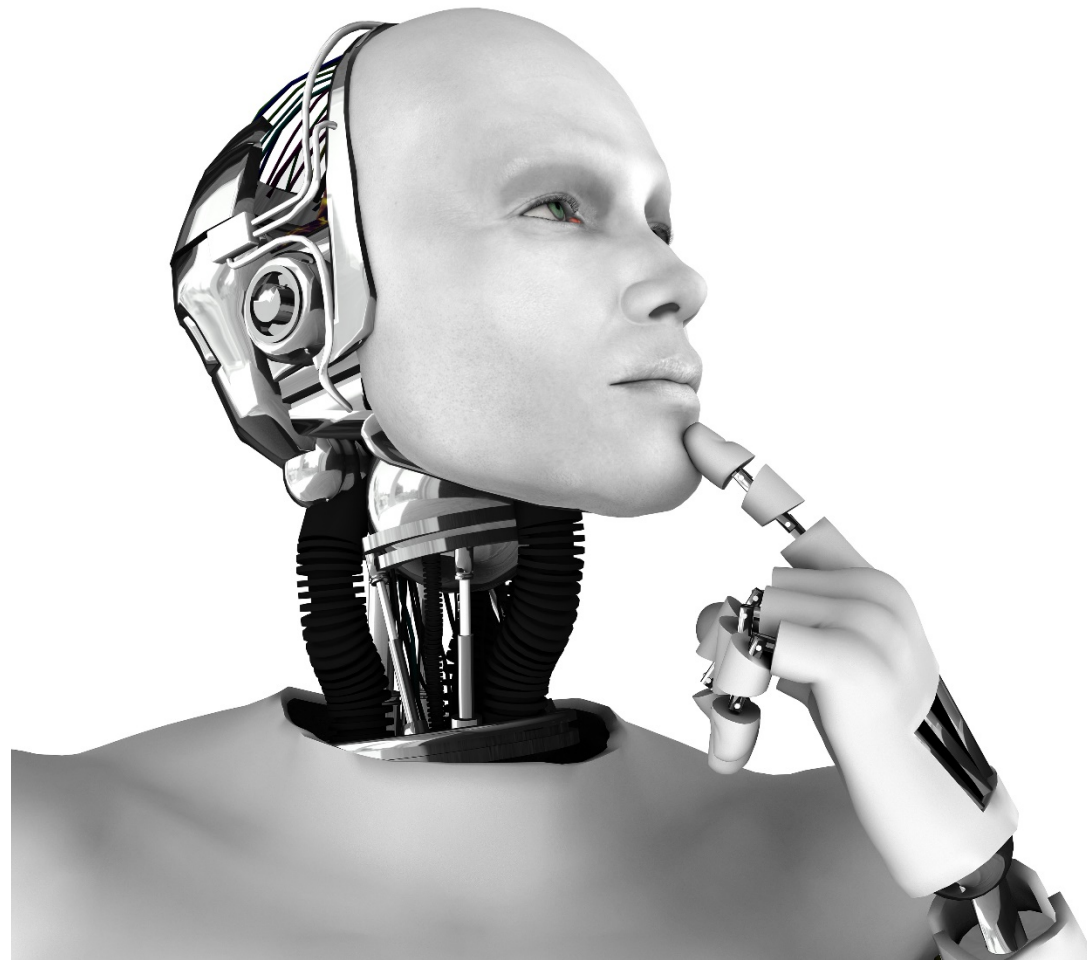
UCI Machine Learning Repository

archive.ics.uci.edu/ml





???



“with great power,
comes great responsibility”

Uncle Ben, *Spiderman*

