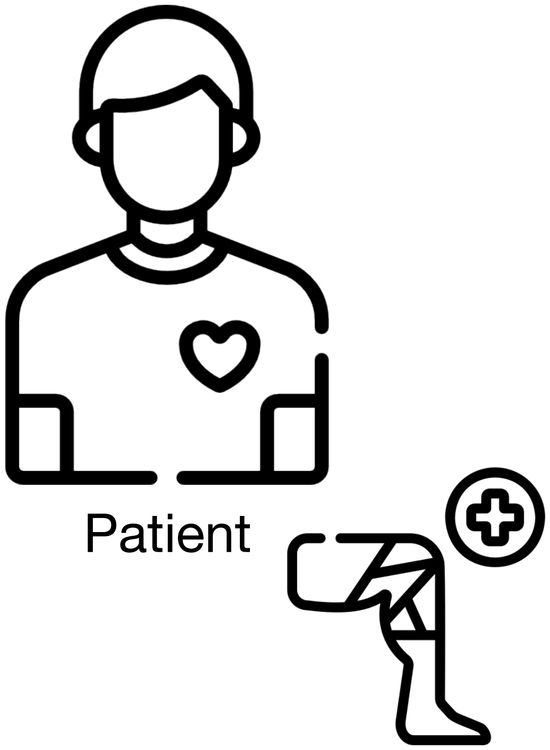
The Intelligent Anamnesis

Before TIA



Patient

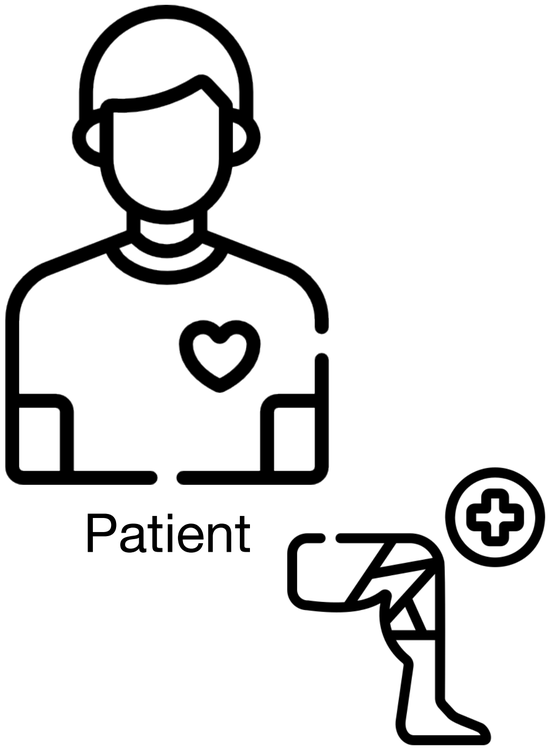
Doctor 2

Doctor 1

Doctor 4

Doctor 3

Before TIA



Patient

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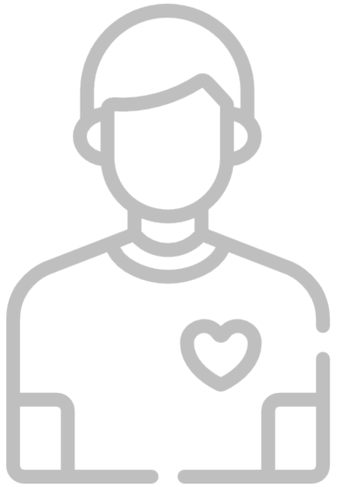
Before TIA



Patient

Does not have the required knowledge to pick the right doctor for the injury

Description of the injury is unstructured and most of the time lacking important information

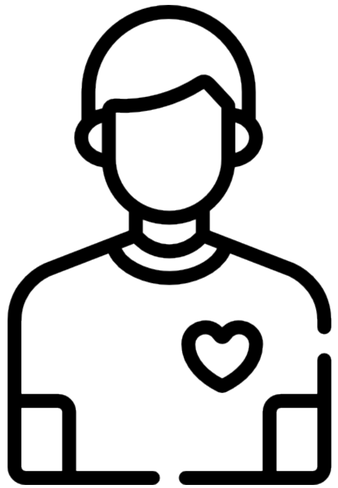
Doctor

Loses precious time and resources performing repetitive diagnostic tests

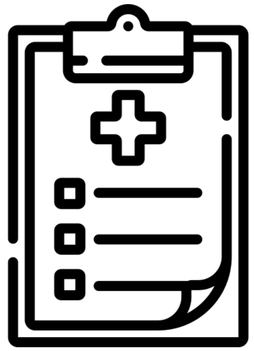
Does not get all necessary information from the patient to build an informed diagnosis

Appointment

After TIA



Patient



Questionnaire

Diagnosis

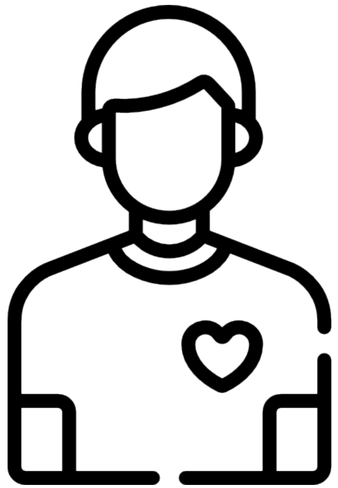
Doctor 2

Doctor 1

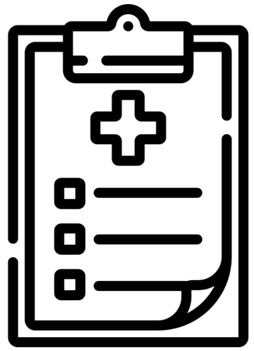
Doctor 4

Doctor 3

After TIA



Patient



Questionnaire

Diagnosis

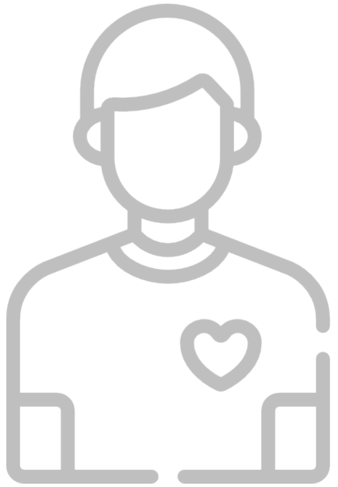
Doctor 2

Doctor 1

Doctor 4

Doctor 3

After TIA



Patient

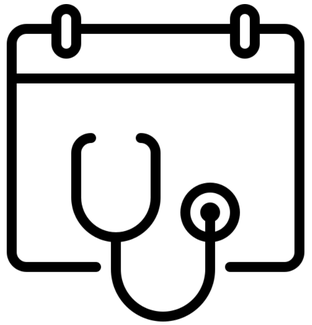
Has the time to gather and structure all the necessary information related to the injury

Has a primary diagnosis that matches them with the right doctor

Doctor

Has a structured description of the injury that serves as a basis for the discussion with the patient

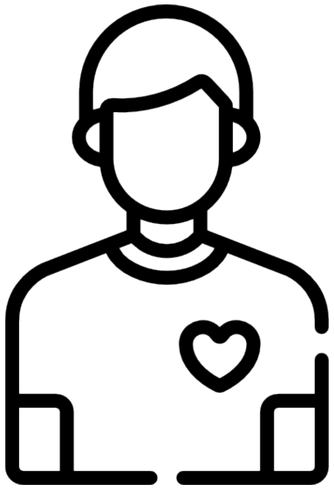
Takes in less falsely scheduled appointment and has more time for more suited patient cases



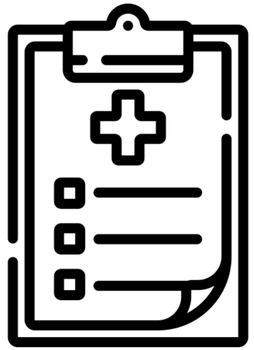
Appointment

Solution

Data Extraction



Patient



Questionnaire

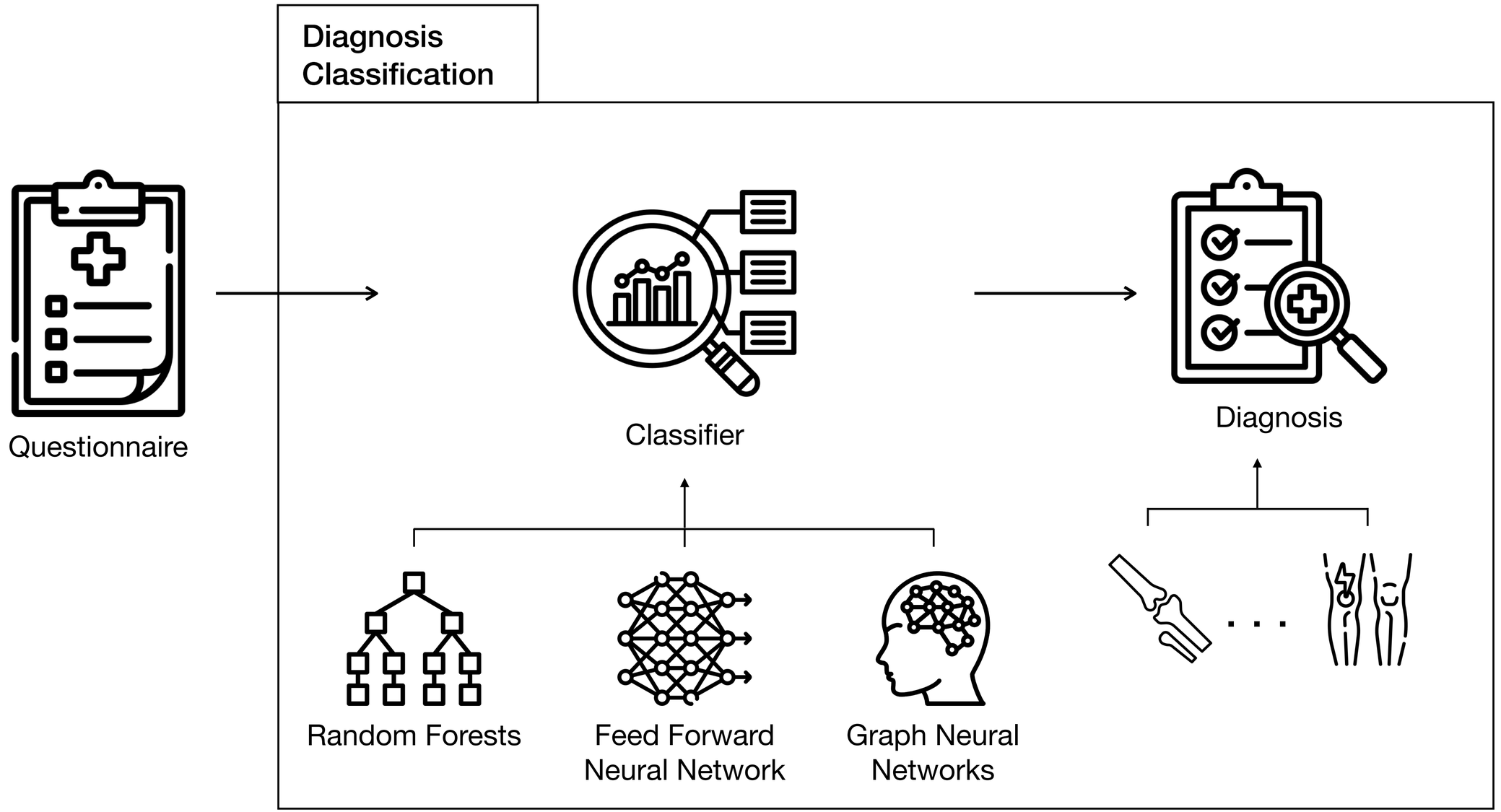
Diagnosis Classification

Diagnosis

Data Transmission

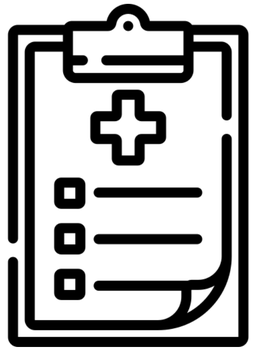
Doctor

Solution


Diagnosis
Classification
Questionnaire
Classifier
Diagnosis
Random Forests
Feed Forward
Neural Network
Graph Neural
Networks

Solution

Classifier Input:



Questionnaire

Training

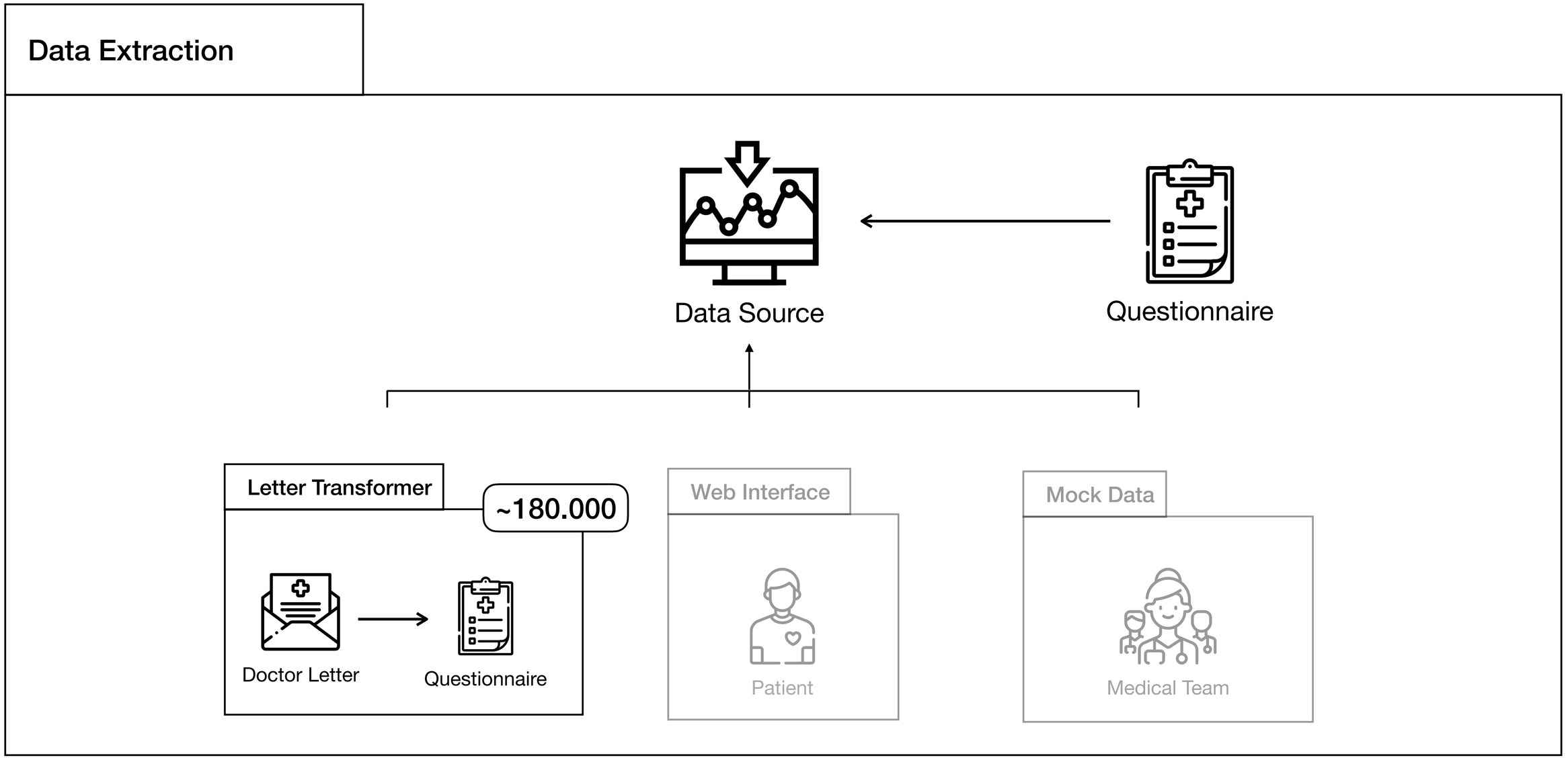
Validation

Testing

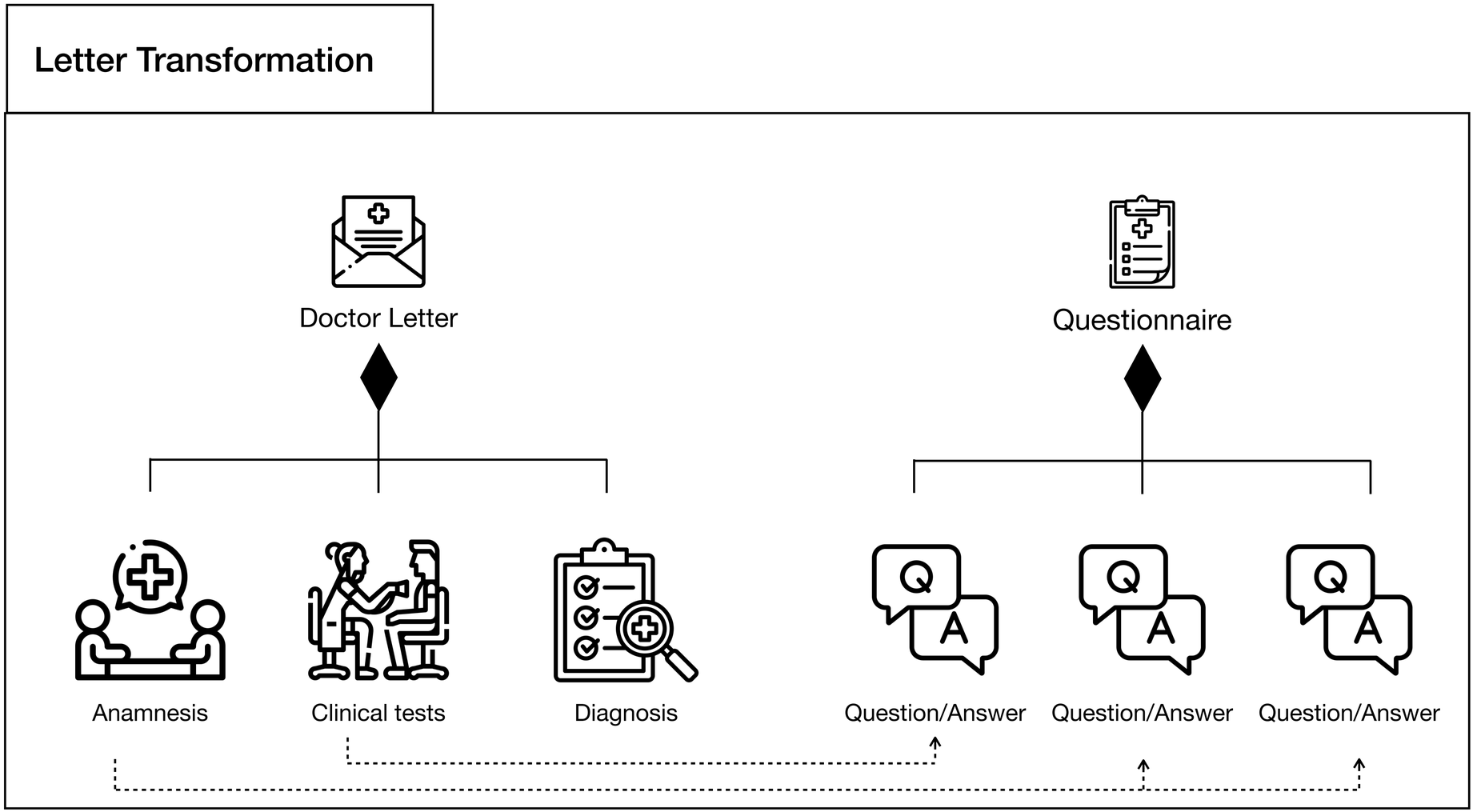
- Medical domain requires high reliability
- We need to cover 20 different diagnosis
- The patients can present a large variety of symptoms that are inter-correlated

We need a large amount of data!

Solution


Data Extraction
Data Source
Questionnaire
Letter Transformer
~180.000
Doctor Letter
Questionnaire
Web Interface
Patient
Mock Data
Medical Team

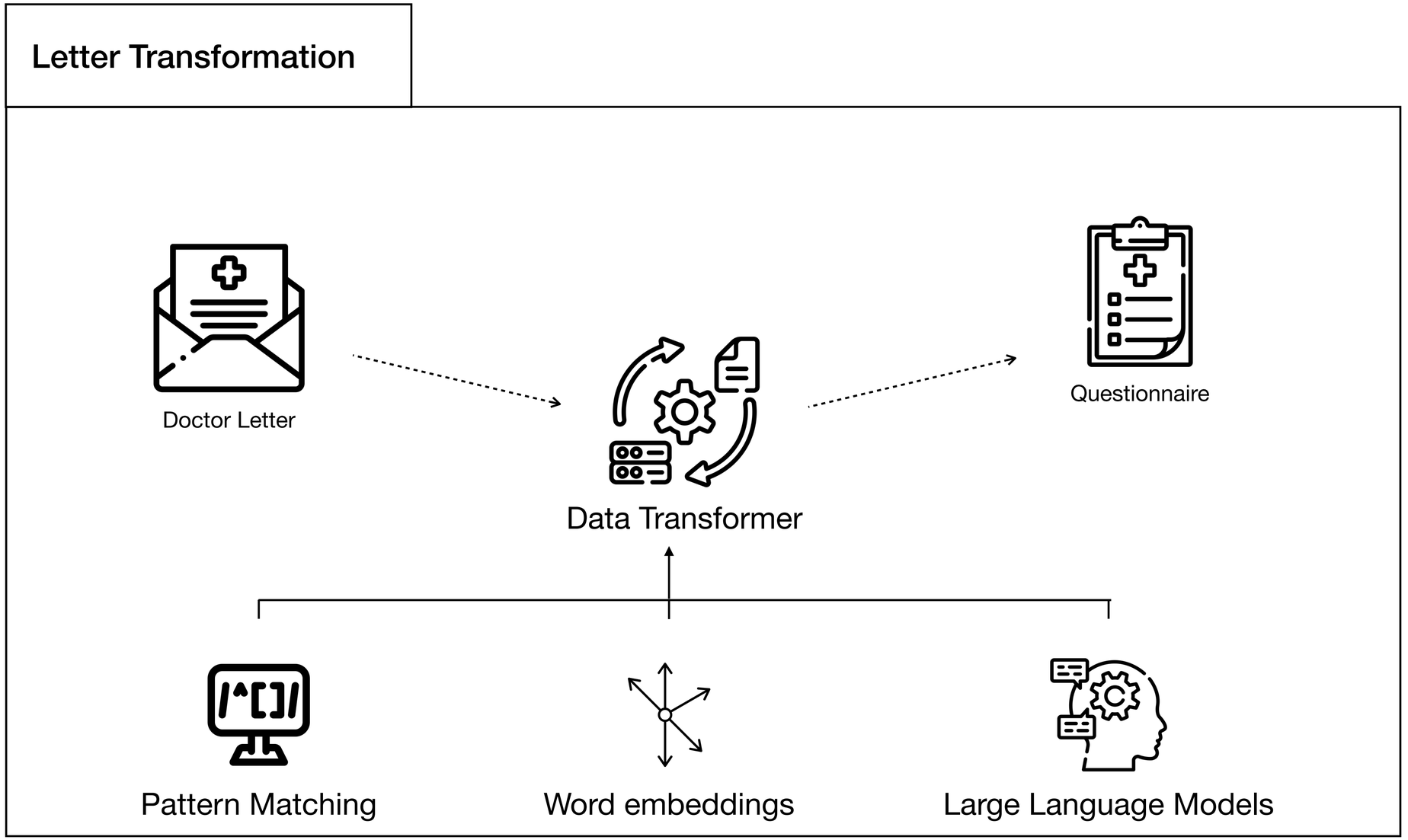
Solution



Challenges

- Letters and questionnaires come from two linguistic fields
- Doctors don’t all write in a unified style
- Letters are open to interpretation
- Questions and answers have different structures and styles

Solution


Letter Transformation
Doctor Letter
Data Transformer
Questionnaire
Pattern Matching
Word embeddings
Large Language Models