**Chapter 3**

**Conception and Implementation**

**3.1Introduction**

This chapter presents the design and implementation of the models used for SQL injection detection. Rather than focusing on a single architecture, we developed and evaluated multiple models based on different paradigms, including traditional machine learning, deep learning, and transformer-based approaches. The main objective is to compare the performance of these models on the same dataset in order to identify the most suitable solution for accurately detecting SQL injection attempts. The following sections describe the dataset used, the preprocessing steps, the design of each model, and the evaluation strategy adopted for training and testing.

**3.2. Dataset**

**3.4 Presentation of development tools**