Software Architecture

The goal of this project is to qualify sales leads in different ways, both in terms of their likelihood of becoming customers and the size of their potential revenue.

External Software

Lead Form (LF)

The *Lead Form* is submitted by every new lead and provides a small set of data about the lead.

Customer Relationship Management (CRM)

The project output is made available to the sales team. This can be done in different ways, e.g. writing to a Google Sheet or pushing directly to SalesForce.

Components

Base Data Collector (BDC)

The *Base Data Collector* fullfills the task of collecting data about a lead from various online sources. All collected data is then stored in a database for later retrieval in a standardized manner.

Expected Value Predictor (EVP)

The *Expected Value Predictor* estimates the expected value of a lead by analyzing the collected data of that lead. This is done using a machine learning approach, where th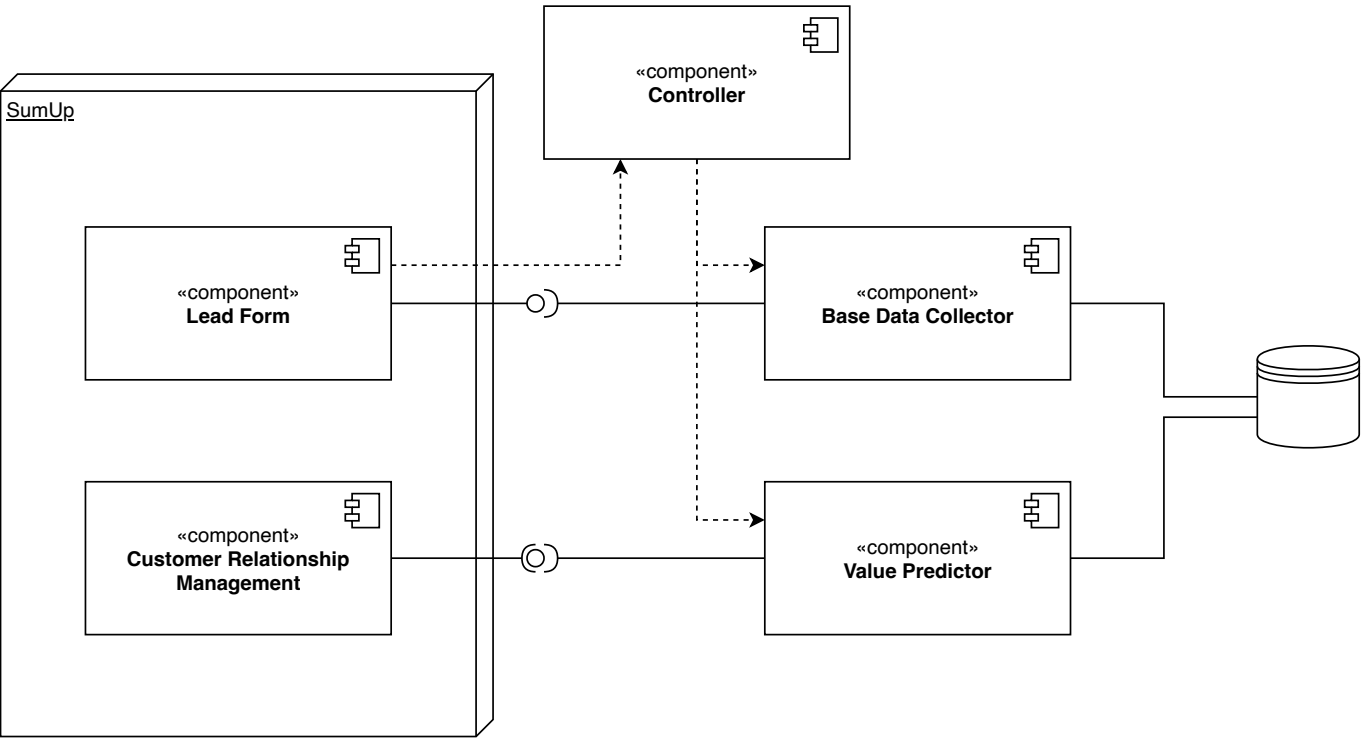e EVP is trained on historical data. Preprocessing of both the collected and the historical data should be done inside the EVP, if it goes beyond the scope of standardization.
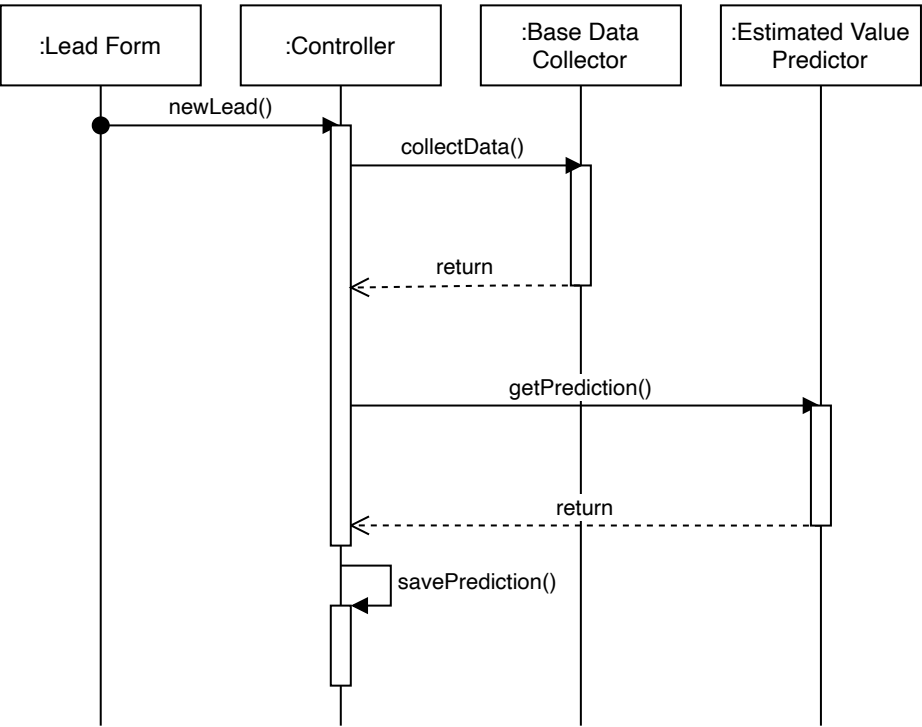
Controller

The *Controller* is an optional component, which coordinates BDC, EVP and the external components as a centralized control instance. That said, another (more advanced) approach would be to use a pipelined control flow, driven by web hooks or similar signals.

Diagrams

Component Diagram

Sequence Diagram

Controller Workflow Diagram

message received

decode message

message valid —no→

yes

set Error Code

route message to sender

enqueue message into messageQueue

enqueue message into routingQueue

routingQueue empty —yes

no

encode message

dequeue message from routingQueue

send message

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messageQueue

idle

messageQueue empty —yes

no

read sender

from lead form —no→

yes

from BDC —no→

yes

from EVP

yes

route message to BDC

route message to EVP

route message to CRM

no

dequeue message from messageQueue → enqueue message into routingQueue