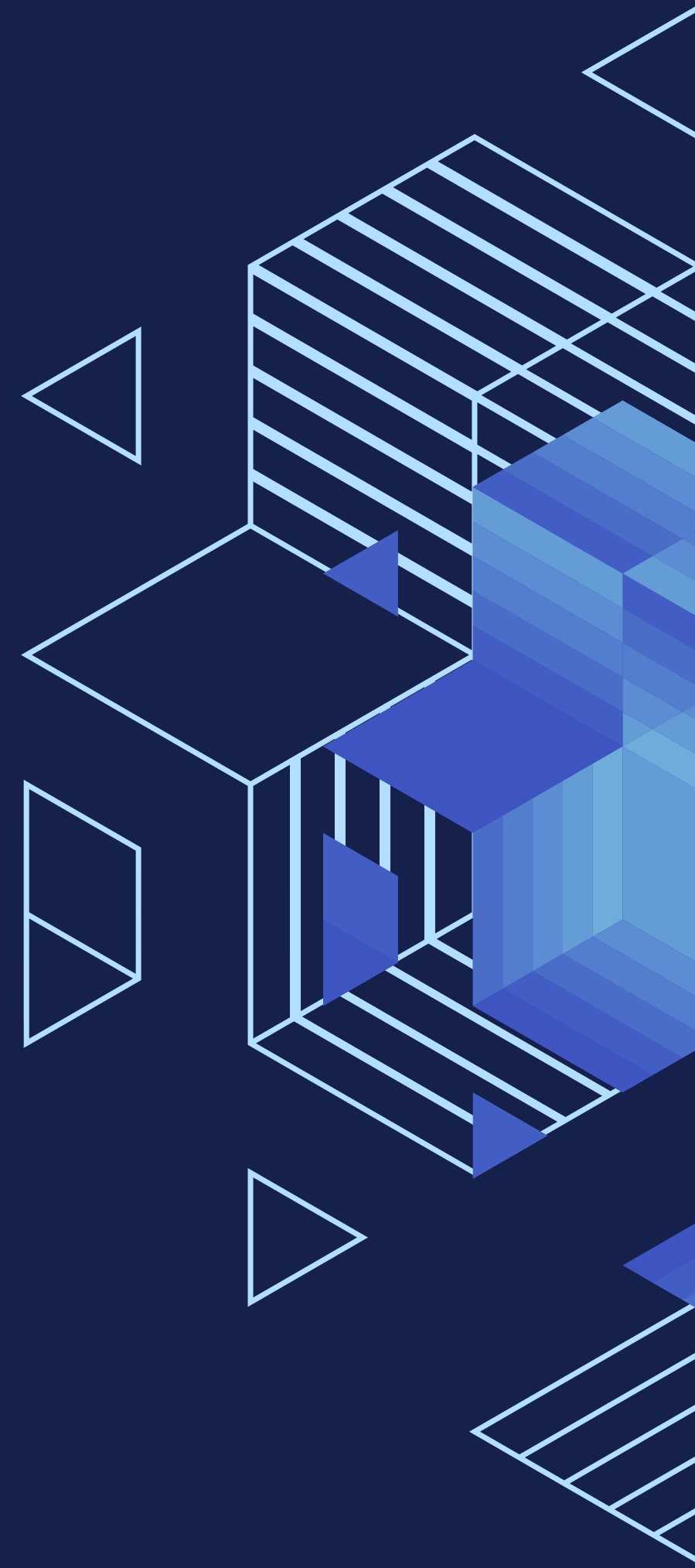


# ARCHICREATORS SPRINT 3



# Schedule

- ▶ New system implementations
- ▶ Tests
- ▶ Tests conclusions
- ▶ Improvement proposals
- ▶ Next steps





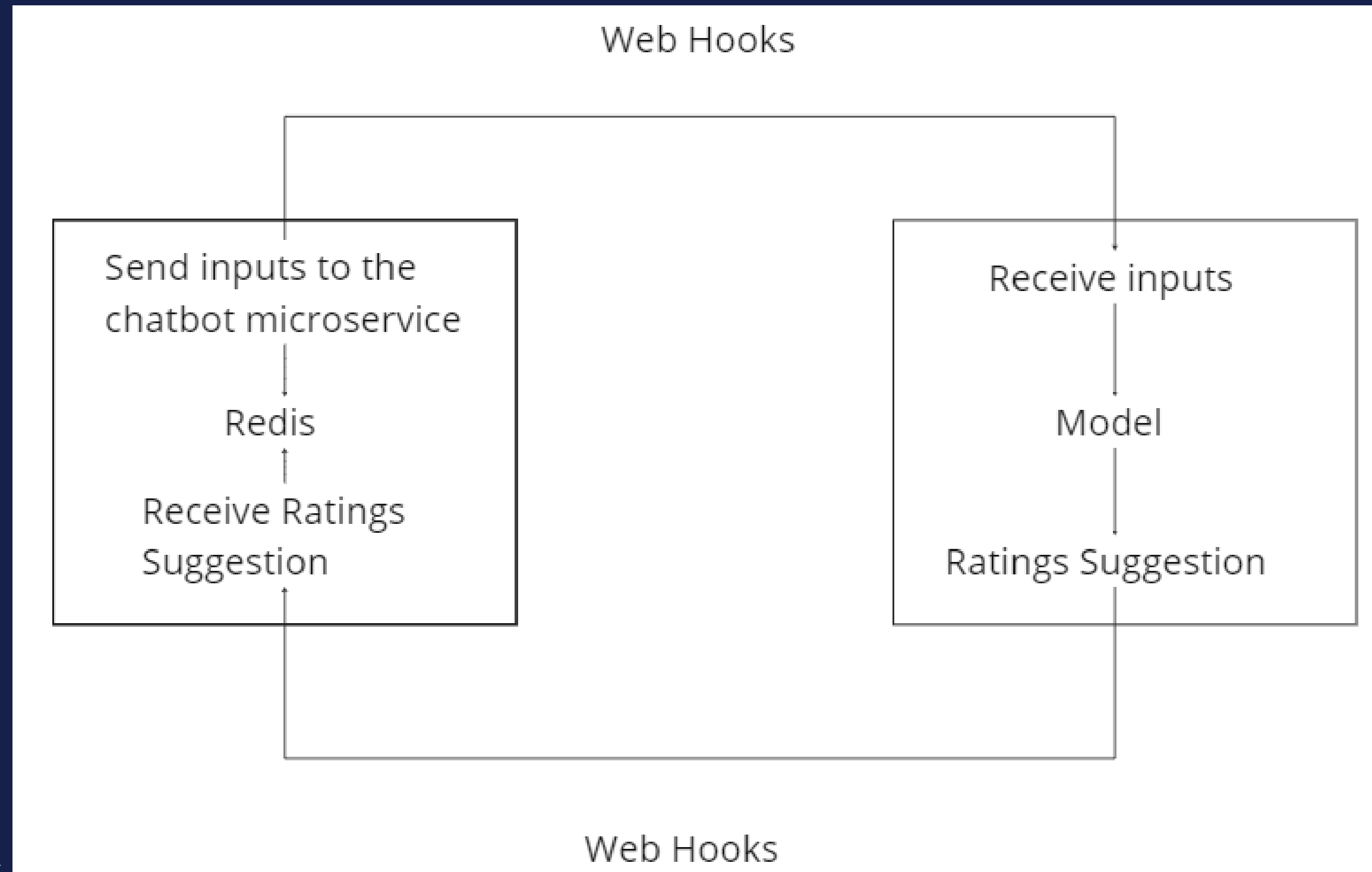


# New system implementations



- Webhook and redis connection
  - Improvement on the Chatbot model
- 


# Webhook and redis implementation





# Improvement on the Chatbot model



- Applied techniques: data preprocessing, Word2Vec, label encoding, and PCA
  - Trained models: Naive Bayes, Decision Tree, Random Forest, and SVM
  - Best accuracy: 72% for level 1
- 



# Tests

- Endpoint: sendDescription
  - Endpoint: receiveClassification
- 

# Tests - sendDescription Endpoint

- Availability: 100%
- Average response-time: 1.01s

```
ur Fraige 11:45
.png checks.....: 100.00% ✓ 300      X 0
data_received.....: 86 kB    2.5 kB/s
data_sent.....: 53 kB    1.5 kB/s
http_req_blocked.....: avg=24.38ms  min=910.8µs med=3.38ms  max=93.99ms p(90)=81.16ms p(95)=86.
69ms
http_req_connecting.....: avg=5.12ms  min=0s      med=2.21ms  max=59.03ms p(90)=11ms   p(95)=23.
32ms
http_req_duration.....: avg=1.01s   min=24.86ms med=830.38ms max=2.9s    p(90)=2.31s p(95)=2.5
1s
{ expected_response:true }....: avg=1.01s   min=24.86ms med=830.38ms max=2.9s    p(90)=2.31s p(95)=2.5
1s
http_req_failed.....: 0.00% ✓ 0      X 300
http_req_receiving.....: avg=442.29µs min=0s      med=0s      max=4.97ms p(90)=1.01ms p(95)=1.4
5ms
http_req_sending.....: avg=1.25ms  min=0s      med=0s      max=60.82ms p(90)=2.54ms p(95)=6.0
2ms
http_req_tls_handshaking.....: avg=0s      min=0s      med=0s      max=0s     p(90)=0s    p(95)=0s
1s
http_req_waiting.....: avg=1.01s   min=23.76ms med=828.51ms max=2.9s    p(90)=2.31s p(95)=2.5
5s
http_reqs.....: 300      8.738356/s
iteration_duration.....: avg=11.04s  min=10.03s  med=10.83s  max=12.98s p(90)=12.39s p(95)=12.
6s
iterations.....: 300      8.738356/s
vus.....: 20      min=20      max=100
vus_max.....: 100     min=100     max=100
```



# Tests - receiveClassification Endpoint

- Availability: 100%
- Average response-time: 951ms


```
data_received.....: 5.1 MB 165 kB/s
data_sent.....: 4.7 MB 151 kB/s
http_req_blocked.....: avg=52.06µs min=0s med=0s max=33.01ms p(90)=0s
p(95)=507µs
http_req_connecting.....: avg=43.64µs min=0s med=0s max=32.81ms p(90)=0s
p(95)=504.2µs
X http_req_duration.....: avg=421.73ms min=1.57ms med=400.38ms max=1.94s p(90)=831.78ms
p(95)=951.16ms
{ expected_response:true }...: avg=421.73ms min=1.57ms med=400.38ms max=1.94s p(90)=831.78ms
p(95)=951.16ms
✓ http_req_failed.....: 0.00% ✓ 0 X 17972
http_req_receiving.....: avg=52.8µs min=0s med=0s max=14.99ms p(90)=151.21µs
p(95)=509.9µs
http_req_sending.....: avg=18.72µs min=0s med=0s max=8ms p(90)=0s
p(95)=0s
http_req_tls_handshaking.....: avg=0s min=0s med=0s max=0s p(90)=0s
p(95)=0s
http_req_waiting.....: avg=421.66ms min=1.56ms med=400.24ms max=1.94s p(90)=831.78ms
p(95)=951.16ms
http_reqs.....: 17972 580.214322/s
iteration_duration.....: avg=1.42s min=1s med=1.4s max=2.95s p(90)=1.84s
p(95)=1.96s
iterations.....: 17972 580.214322/s
req_duration.....: avg=421.73947 min=1.5791 med=400.388 max=1948.2817 p(90)=831.78428
p(95)=951.1614
vus.....: 7 min=7 max=1000
vus_max.....: 1000 min=1000 max=1000
```





# Tests conclusion

Even though our endpoints maintain 100% availability, an increase in the number of users corresponds to a rise in response time. Therefore, it can be inferred that the system's performance may decline during peak user activity.



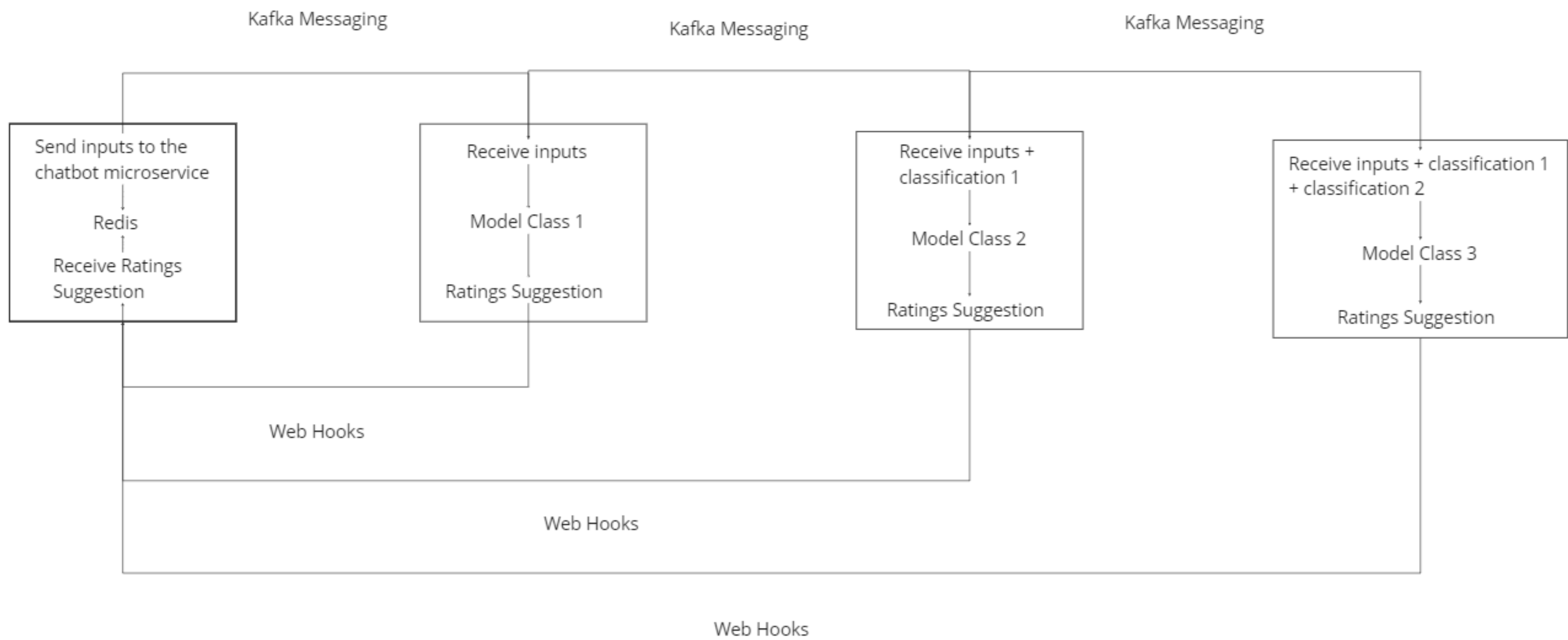


# Improvement proposals

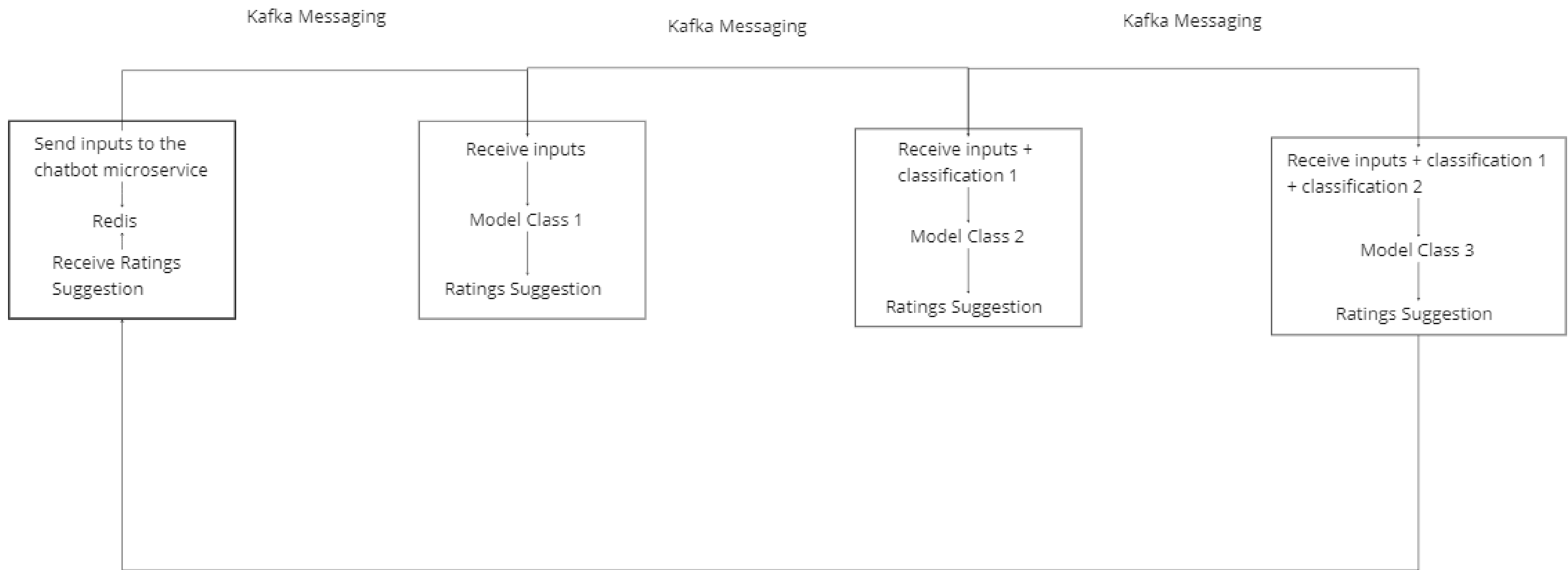


- Apache Kafka
- Improvement on the Chatbot model.









Web Hooks: Class 1 + Class 2 + Class 3

# Next steps



SPRINT 1



SPRINT 2



SPRINT 4



SPRINT 5

- Adjustments to the implementations
- Adjustments tests
- Measure the new system
- Architecture tradeoffs

The background is a dark blue field filled with abstract geometric patterns. In the upper half, there are several 3D cubes and rectangular prisms. Some are rendered with white outlines, while others are filled with various shades of blue, creating a sense of depth and perspective. Below these, and scattered throughout the lower half, are various flat geometric shapes like triangles, squares, and rectangles, some in white and some in blue. The overall composition is modern and architectural.

**THANK YOU!**