MICHIGAN STATE
U N I V E R S I T Y

Alpha Presentation
Identity Based Communication and Content Services

The Capstone Experience

Team MaxCogito

Bryan Hitchcock
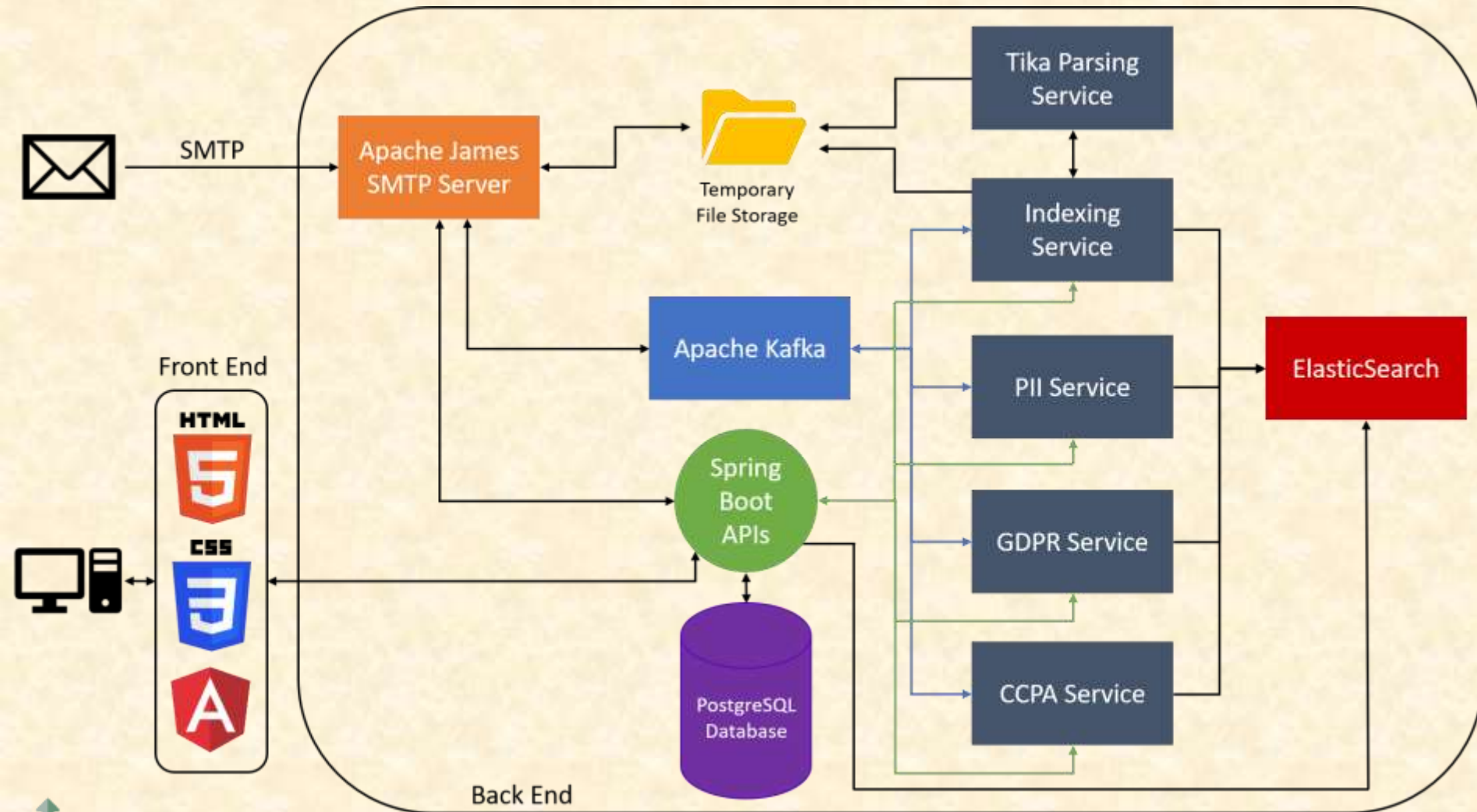Andrew Kim
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Project Overview

- Give companies insight into the messages passing through their servers.
- Analyze and process emails
  - Allow companies to create custom policies
  - Tag messages that do not comply with firm policies
  - Highlight data that does not comply
- Maintain compliance with regulations
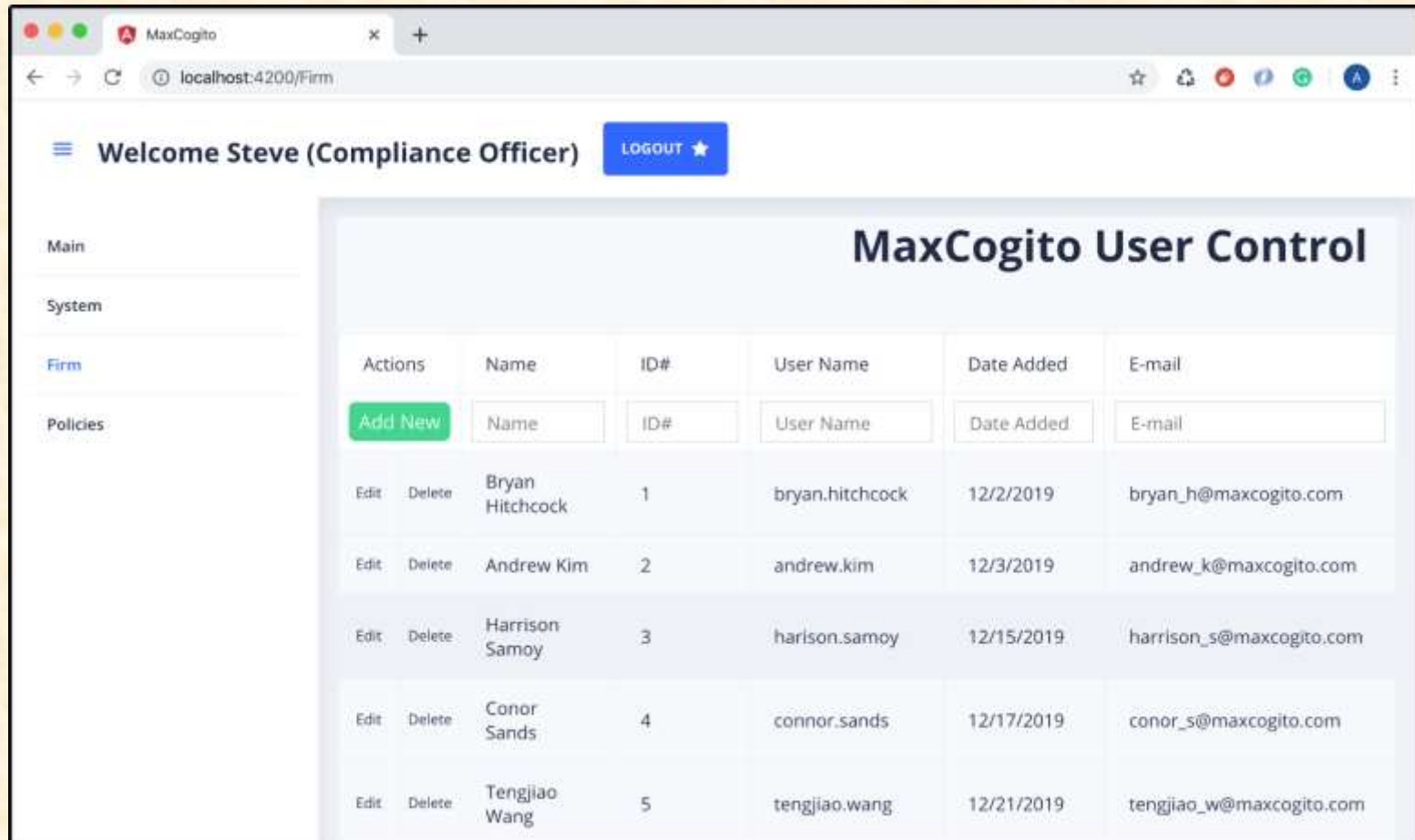 - Privacy: GDPR, CCPA
  - Financial: SEC, ESMA

System Architecture

Compliance Officer Dashboard

User Management Dashboard

Regex Consumer Example

```
*** EMAIL ********************************

Dear Mr. Dykson,

This is a test for our Alpha presentation. Please let us know if you have
any questions by calling us at 555-555-5555 .

Also feel free to use our credit card: 340000000000009

- Team Maxcogito

********************************************
Searching for...

[AMEX CC](s)
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[340000000000009]

[PHONE NUMBER](s)
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[555-555-5555]
```

AWS Elasticsearch Index Success

```
1▾ {
2    "_index": "alpha",
3    "_type": "_doc",
4    "_id":
    "493269ec3b143ec768535b15906edf9bb4939c47ec3762996ef546acb4083
    87b",
5    "_version": 1,
6    "_seq_no": 2,
7    "_primary_term": 1,
8    "found": true,
9▾   "_source": {
10      "sender": "steve@maxcogito.com",
11      "toAddr": "james@maxcogito.com",
12      "subject": "Alpha Presentations",
13      "toList": "james@maxcogito.com",
14      "ccList": "NULL",
15      "bccList": "NULL",
16      "attachFiles": "NULL",
17      "sentDate": "Tue Feb 18 04:22:32 UTC 2020",
18      "htmlContent": "NULL",
19      "textContent": "Hi James,\r\n\r\nSee attached for the
    alpha presentation.\r\n\r\nThanks,\r\n\r\nSteve\r\n\r\n",
20      "gdpr": "NULL",
21      "pii": "NULL",
22      "ccpa": "NULL"
23    }
24  }
```

What's left to do?

- Apache Tika integration

- Set up Apache James as SMTP relay

- Make Apache Kafka more robust

- Write additional Apache Kafka consumers

- Secure API endpoints

- Front end

Questions?