



UnderLeaf

By: Josh Kao, Chris Lal, Ben & Harrison Getches

Agenda

01 Project Overview

02 Tools

03 Architecture Diagram

04 Challenges

05 Future Scope

06 Demo

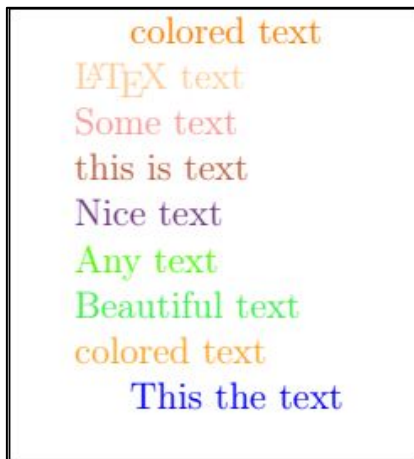


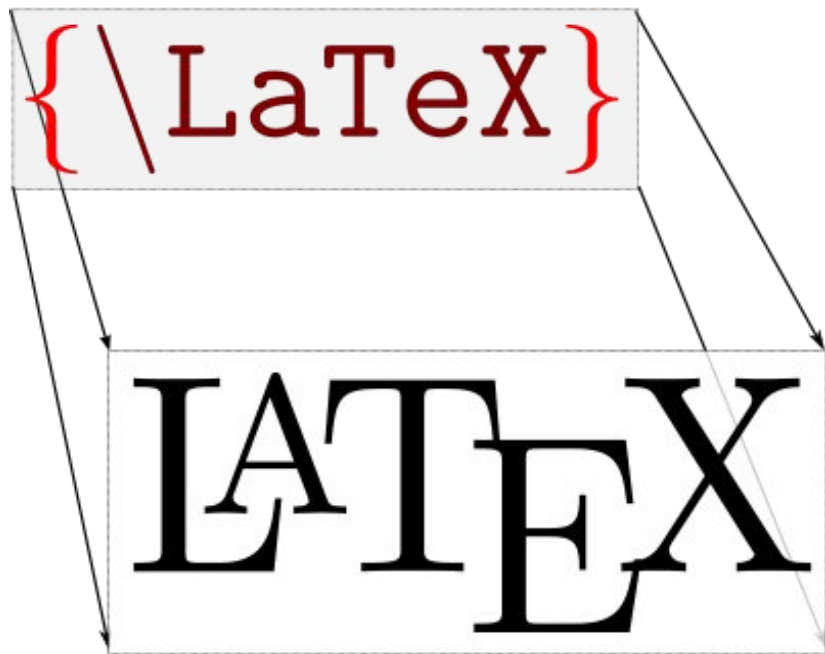
An Overview of Underleaf.

Elevator Pitch Slide



- Innovative web-based LaTeX editor designed to simplify the process of writing and sharing academic and technical documents





Our Principle:

Eliminating the
technical barrier
that LaTeX poses
to our future
researchers



Dependencies and Tools.

Tools and Our Ratings



5/5



5/5



4/5



PostgreSQL

4/5



POSTMAN

4/5

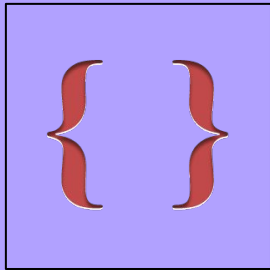


4/5

Other tools:

- **HTML: 5/5**
- **CSS: 4/5**
- **Handlebars: 4/5**
- **Bootstrap: 3/5**
- **Mocha: 4/5**
- **Teams: 5/5**

Dependencies and Our Ratings



Latex.js

4/5



CodeMirror

5/5



GmailSMTP
& NodeMailer

5/5

Other tools:

- **Axios: 5/5**
- **Bcrypt: 5/5**
- **OpenAI API: 100/5**

Methodologies

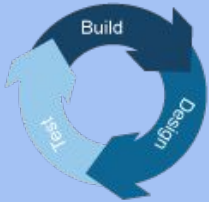
Iterative/Agile:



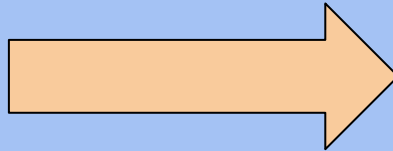
SPRINT 1

SPRINT 2

FINAL SPRINT

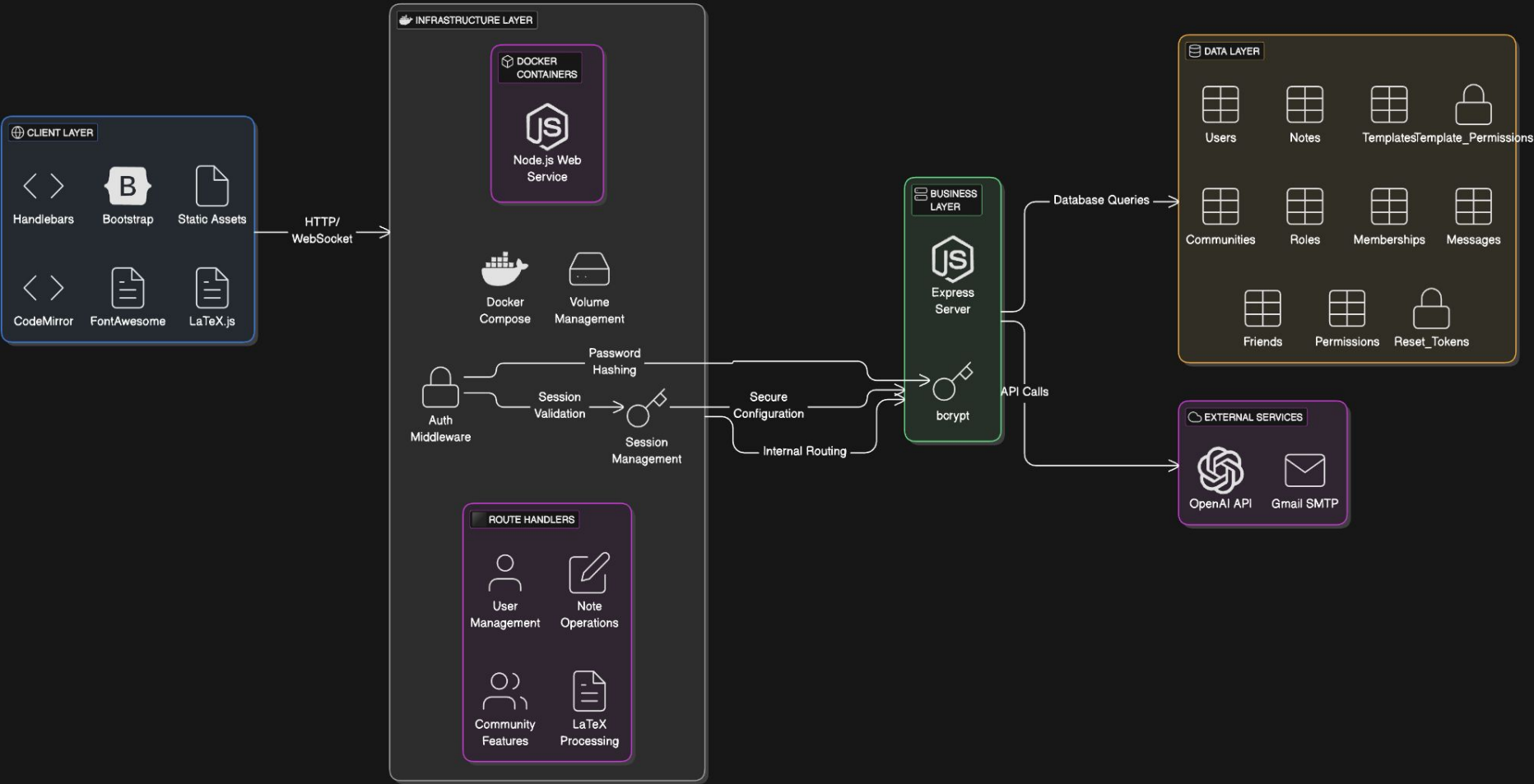


Peer Code Reviews:





Our Architecture.





Challenges We Faced.

Our difficulties



Integrations

LaTeX and HTML inherently don't work well together (sanitizing data)

Multiple Modals w/ Handlebars

ML is hard

Tensorflow CNN on HASYv2 dataset scored >80% accuracy (k-fold)

Utilizing it was hard- both porting to our app, and using it concurrently on an entire document.

Learning Node

Passing lots of context through Node

Learning difficulties around routing



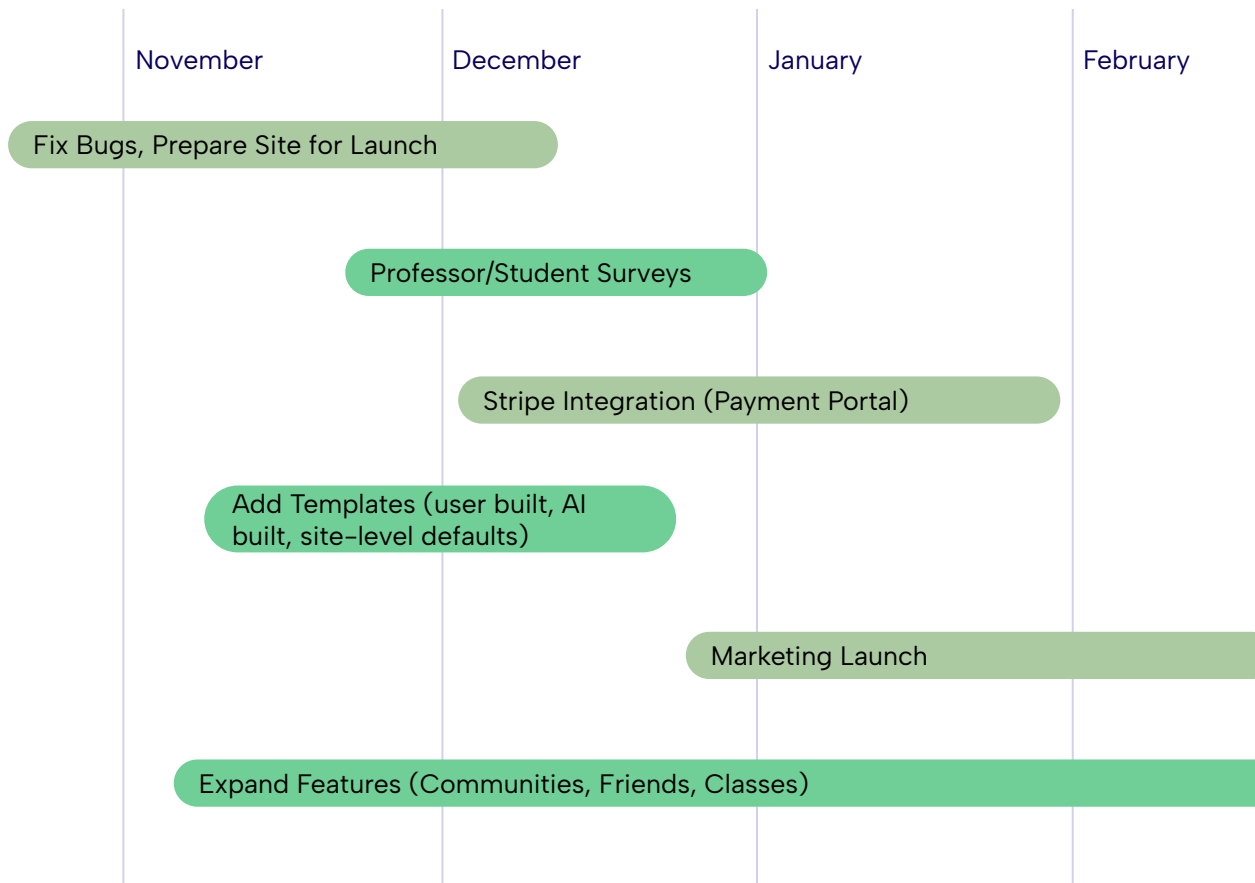
Our Future.

Future Focused

Timeline

Feature Agenda:

- Paid Premium Accounts
- Templates
- Expand Professor-Student Use Case





Demo.

Thank
you.