

**MICHIGAN STATE**  

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**UNIVERSITY**

# Beta Presentation

## Predictive Claims Scoring

### The Capstone Experience

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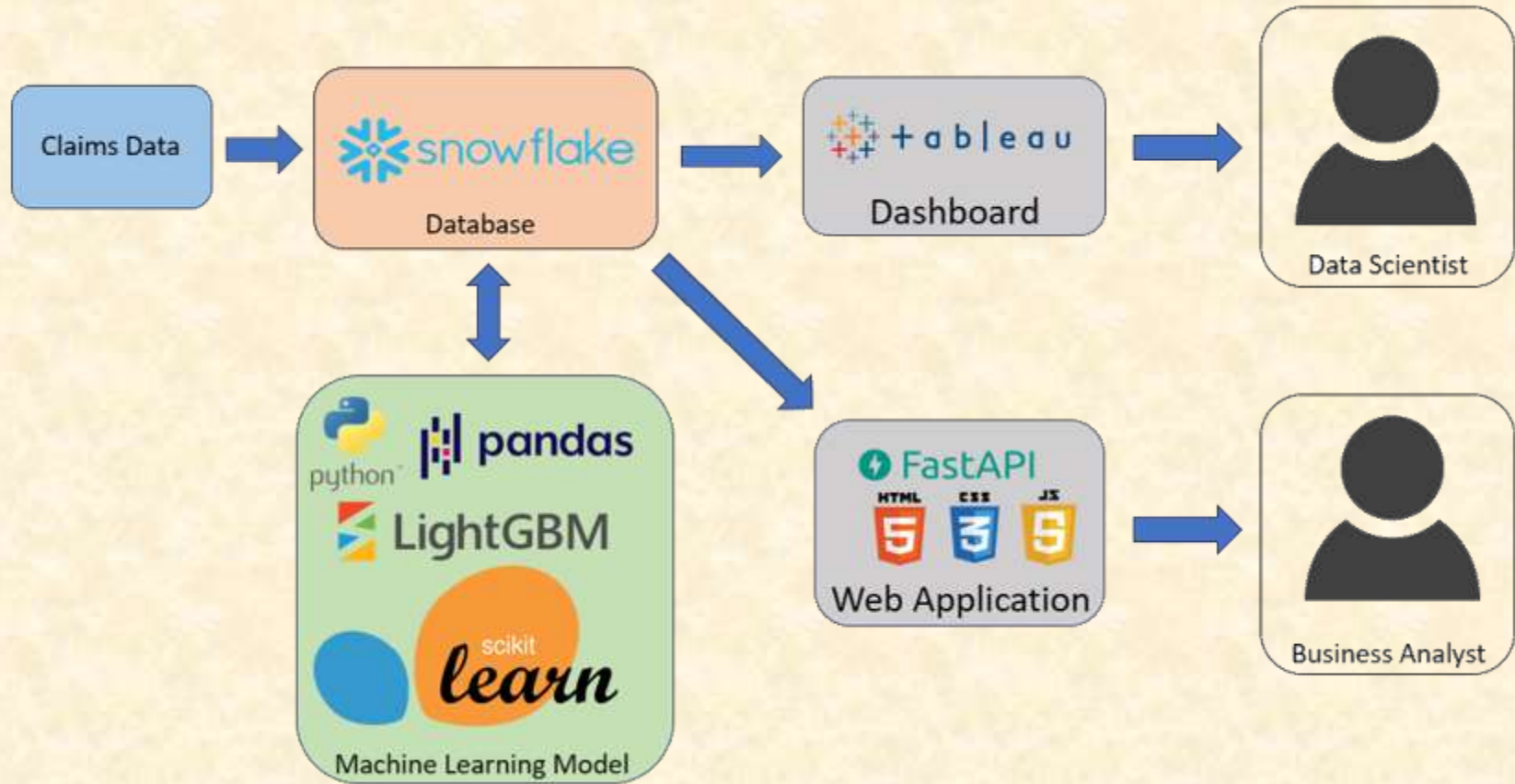
*From Students...  
...to Professionals*

# Project Overview

- Reviewing dental insurance claim models is a time-consuming process.
- Predictive Claims Scoring accelerates claim reviewal by identifying patterns in denied claims.
- A machine learning model scores every claim on its likelihood of FWA.
- A web application gives a business persona a user-friendly way to search for claim scores and metrics.
- Tableau dashboards give a data science persona exploratory analysis of the metrics and model.



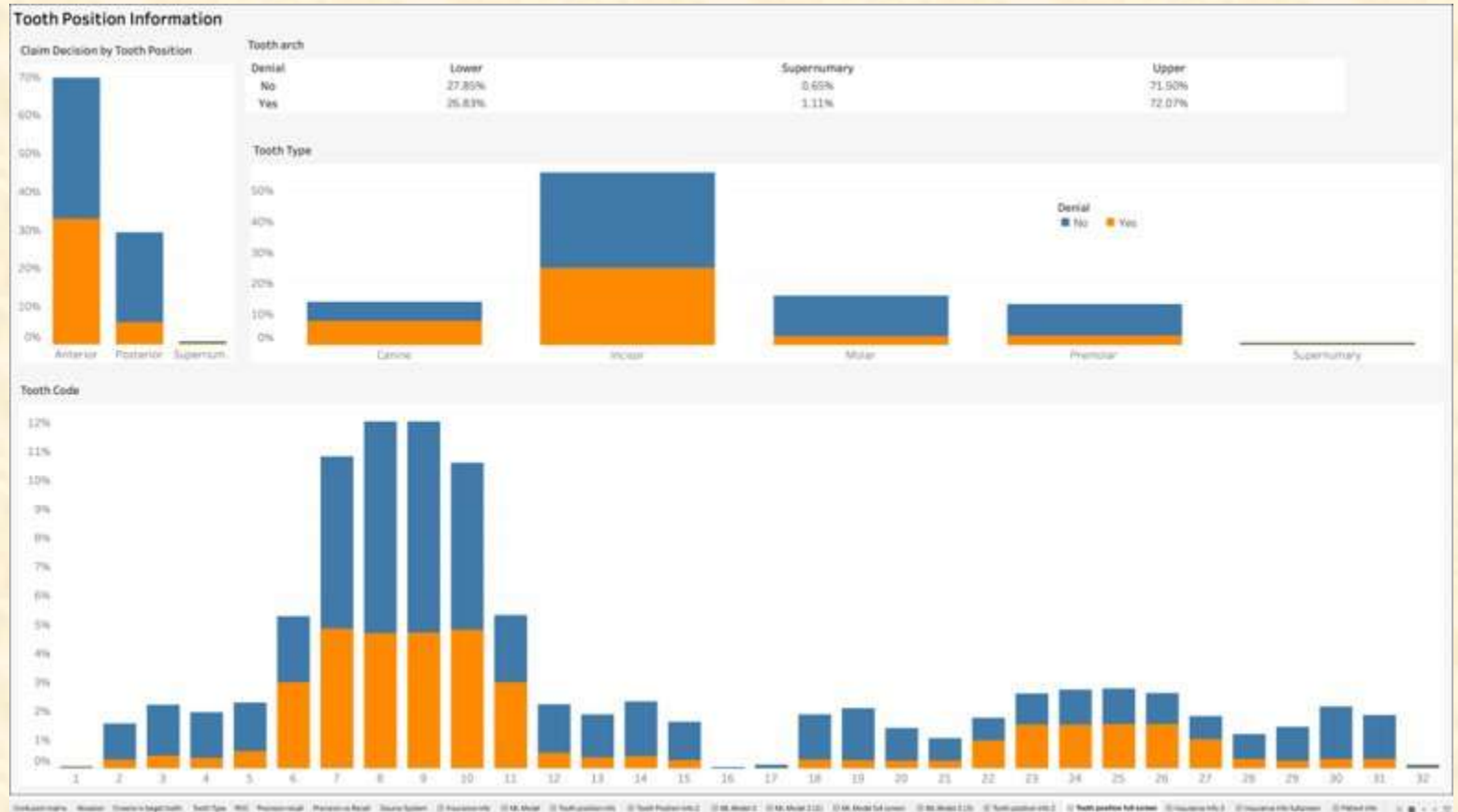
# System Architecture



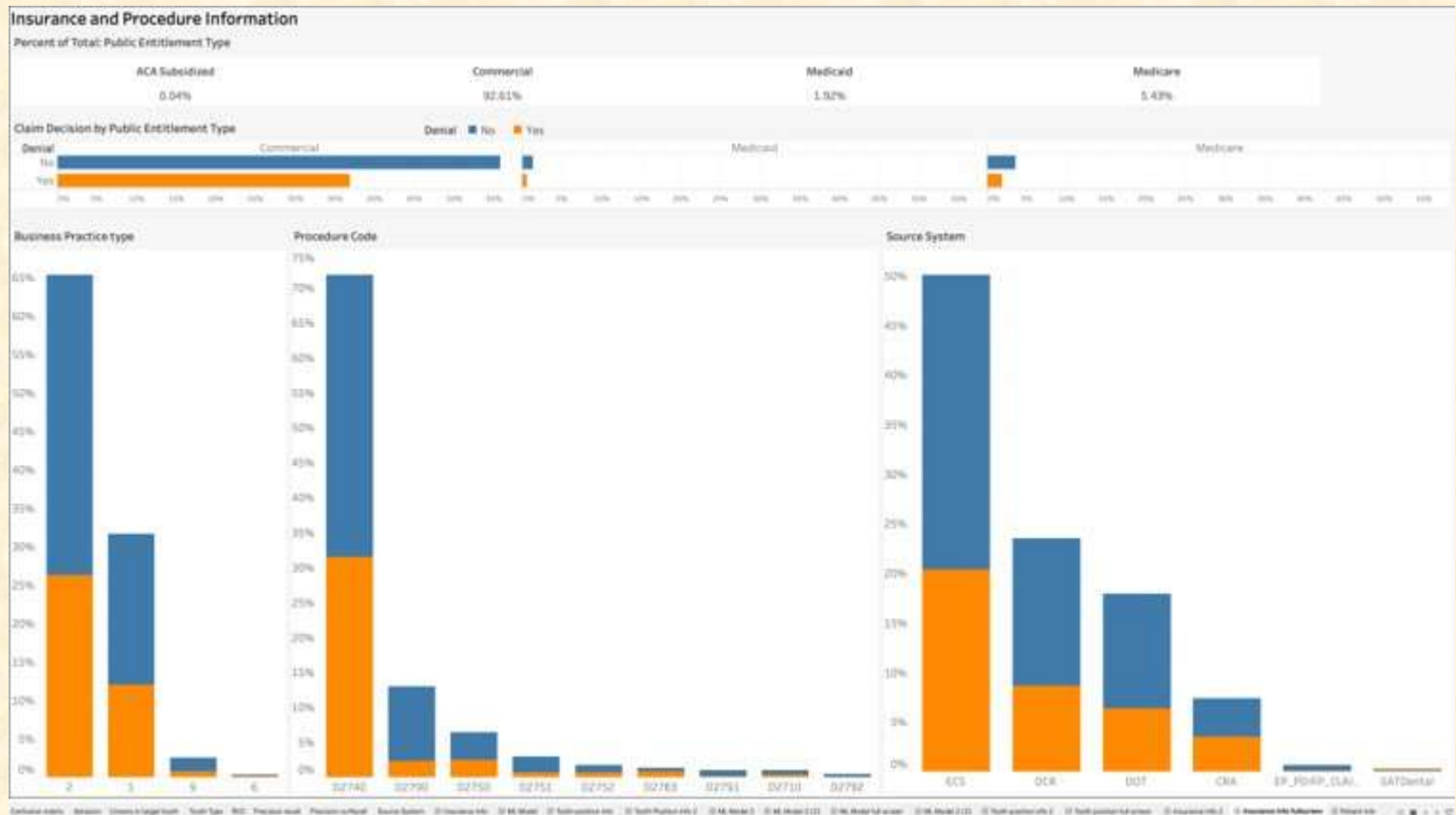
# ML Model Dashboard



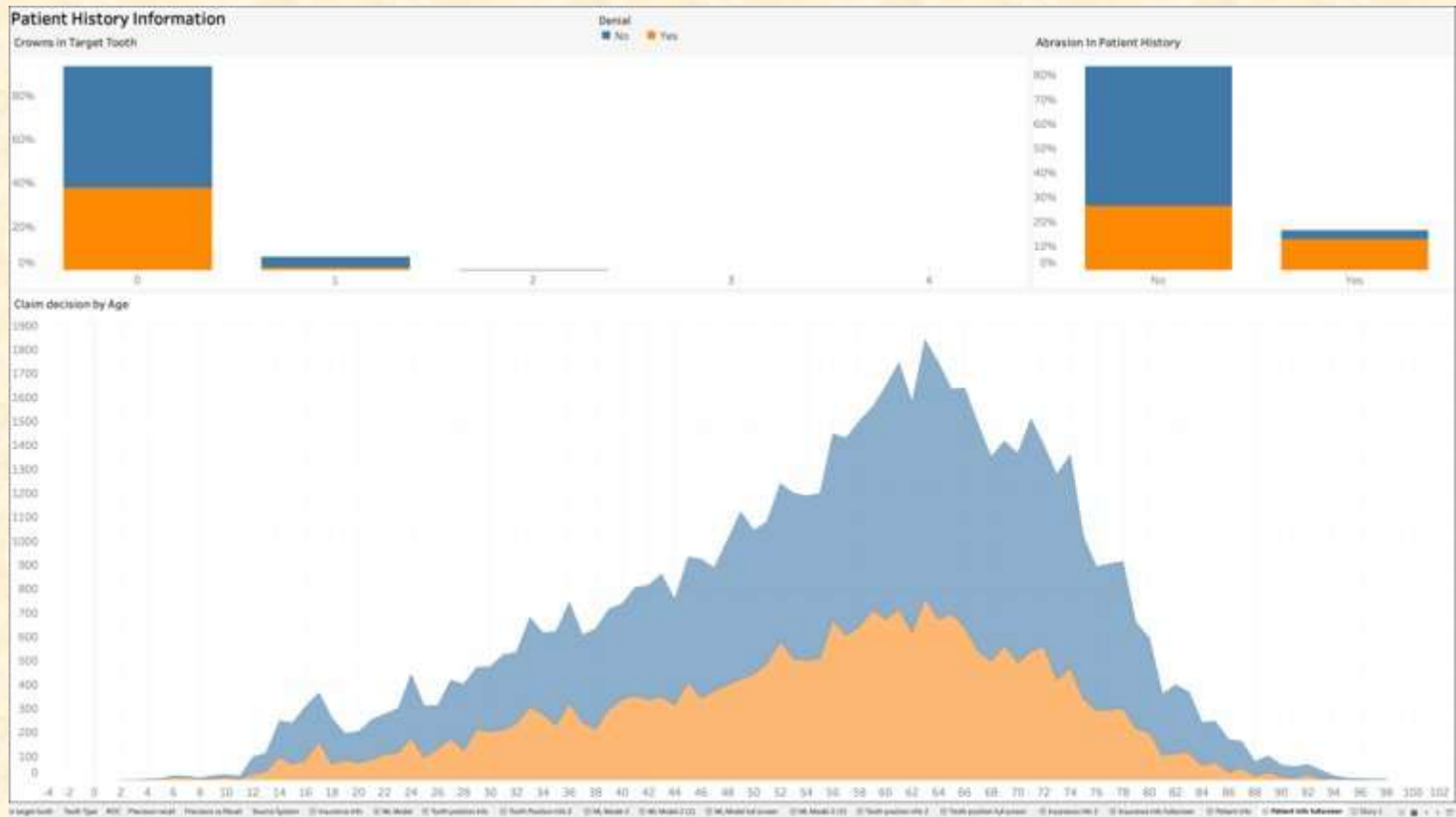
# Tooth Position Dashboard



# Insurance and Procedure Dashboard



# Patient History Dashboard



# Home Page 1





# Home Page 2

Roosevelt Home Claim Inserting

Claim Search

Enter Claim Number

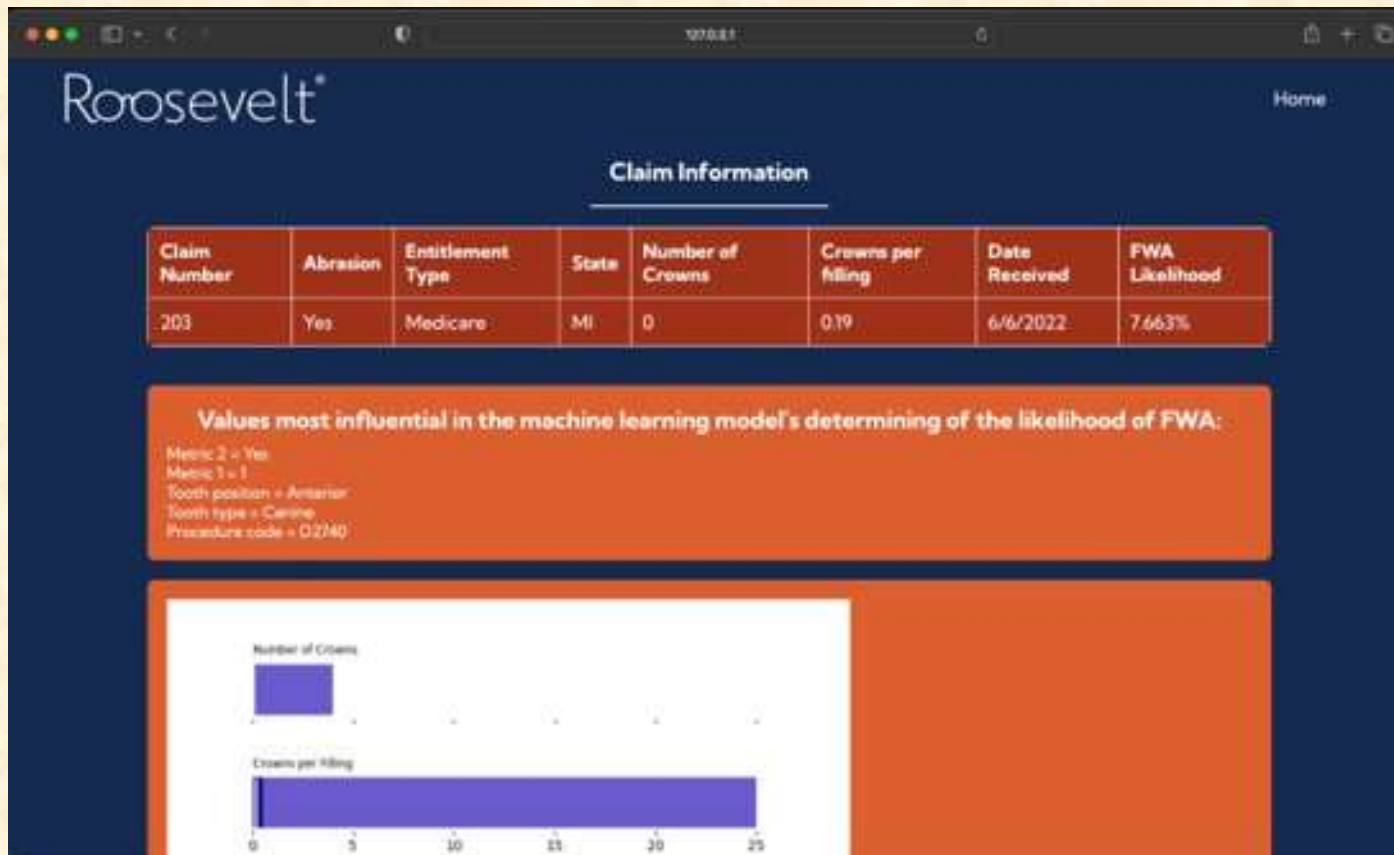
FWA Sort: [default] Time Sort: [default]

1st page 2nd page 3rd page 1/636

Claim Number	FWA Likelihood	Abrasion	Entitlement Type	State	Number of Crowns	Crowns per Mling	Date Received
1	19.639%	No	Medicaid	MI	0	0.03	2/18/2022
2	0.254%	No	Medicaid	MI	0	0.67	6/1/2022
3	0.205%	No	Medicaid	MI	0	0.18	6/22/2022
4	1.947%	No	Medicaid	MI	0	0.2	9/16/2022
5	18.799%	No	Medicare	MI	0	0.1	1/10/2022
6	2.052%	No	Medicare	MI	0	0.08	1/28/2022
7	1.967%	No	Medicare	MI	0	0.47	1/31/2022
8	34.984%	No	Medicare	MI	0	0.33	2/2/2022



# Claim Results Page 1



# Claim Results Page 2



# What's left to do?

- Stretch Goals
  - "Insert Batch of Claims" webpage
  - Comments section on Claim Result webpage
  - Display Top metrics for each model on Tableau
- Other Tasks
  - Change the website colors and fonts to fit the internal Roosevelt Innovations websites
  - Match Tableau colors with that of web app



# Questions?

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