

**MICHIGAN STATE**  

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**UNIVERSITY**

# Beta Presentation

## Provider Analysis Toolkit

The Capstone Experience

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

# Project Sponsor Overview

- Sponsor Overview
  - Smart platform for processing ancillary insurance claims
  - Owned by Delta Dental
  - 22M+ members managed
  - \$972M in total cost savings

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simple. seamless. smart.



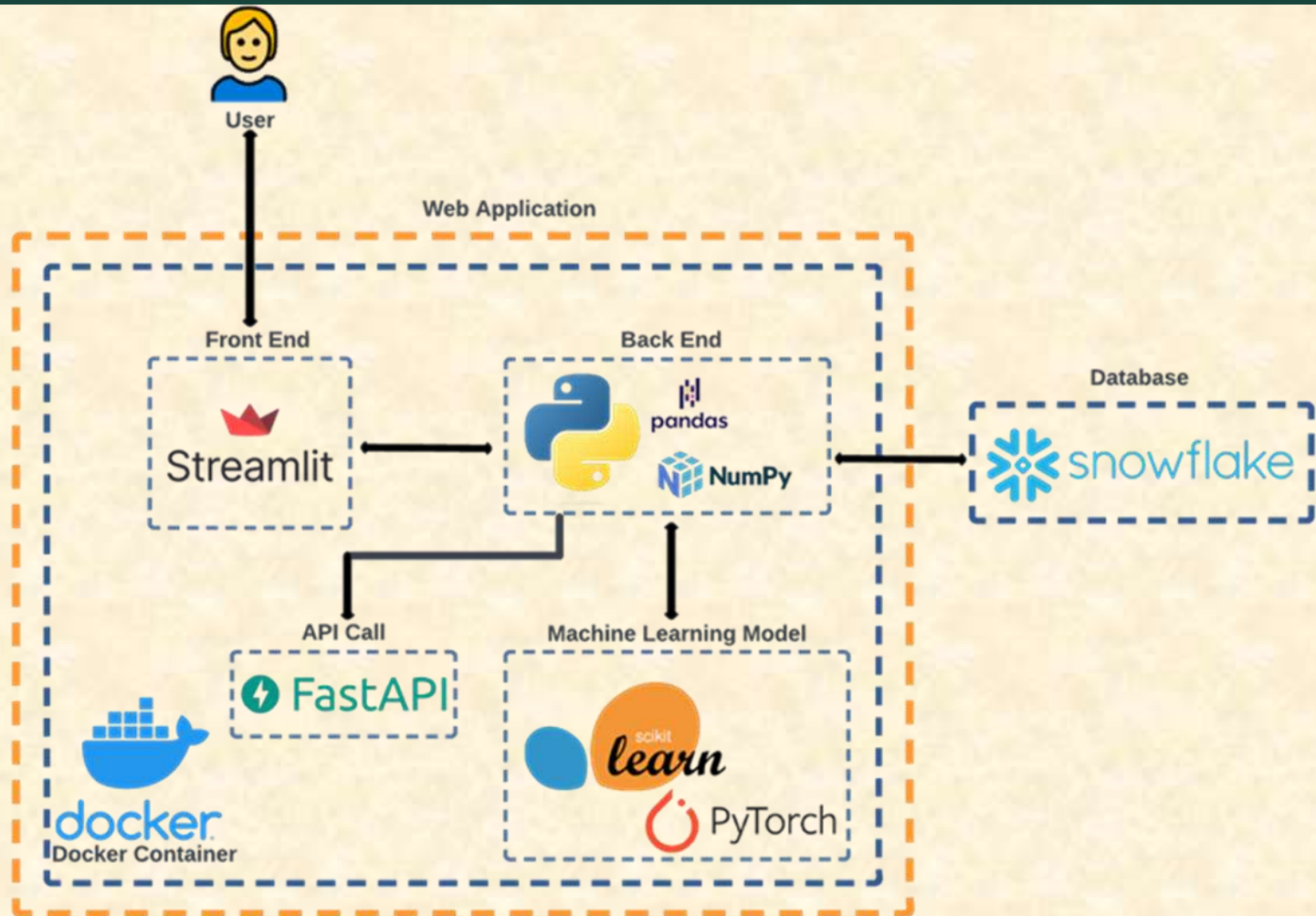
# Project Overview

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- Used by fraud analysis teams to identify outliers in processed dental insurance claims
- Social features, optimizations, and expanded ML capabilities
- Labor hours, improve internal communications, and increase accuracy



# System Architecture



# Home

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**Home**

Total Providers: **16146**      Total Services: **54**      Average Days: **23**

**Top N Filter**

State: **MI**      Effective Specialty: **General Practitioner**      Score Category: **Select Category**      Total Plan Pay(min):      Total Patients(min):

State	Effective Specialty	Provider ID	Total Plan Pay	Total Patients
<input type="checkbox"/> MI	General Practitioner	801811 MI	\$453,508.08	1008
<input type="checkbox"/> MI	General Practitioner	470984 MI	\$514,128.53	1419
<input type="checkbox"/> MI	General Practitioner	930049 MI	\$647,992.82	2549
<input type="checkbox"/> MI	General Practitioner	949947 MI	\$361,867.31	1121
<input type="checkbox"/> MI	General Practitioner	342940 MI	\$631,850.89	1309
<input type="checkbox"/> MI	General Practitioner	482159 MI	\$962,308.06	1810
<input type="checkbox"/> MI	General Practitioner	206479 MI	\$298,373.37	776
<input type="checkbox"/> MI	General Practitioner	863368 MI	\$361,073.65	879
<input type="checkbox"/> MI	General Practitioner	222912 MI	\$2,659,603.26	4903

Add to Watch List      Share with:  share

**Shared With Me**

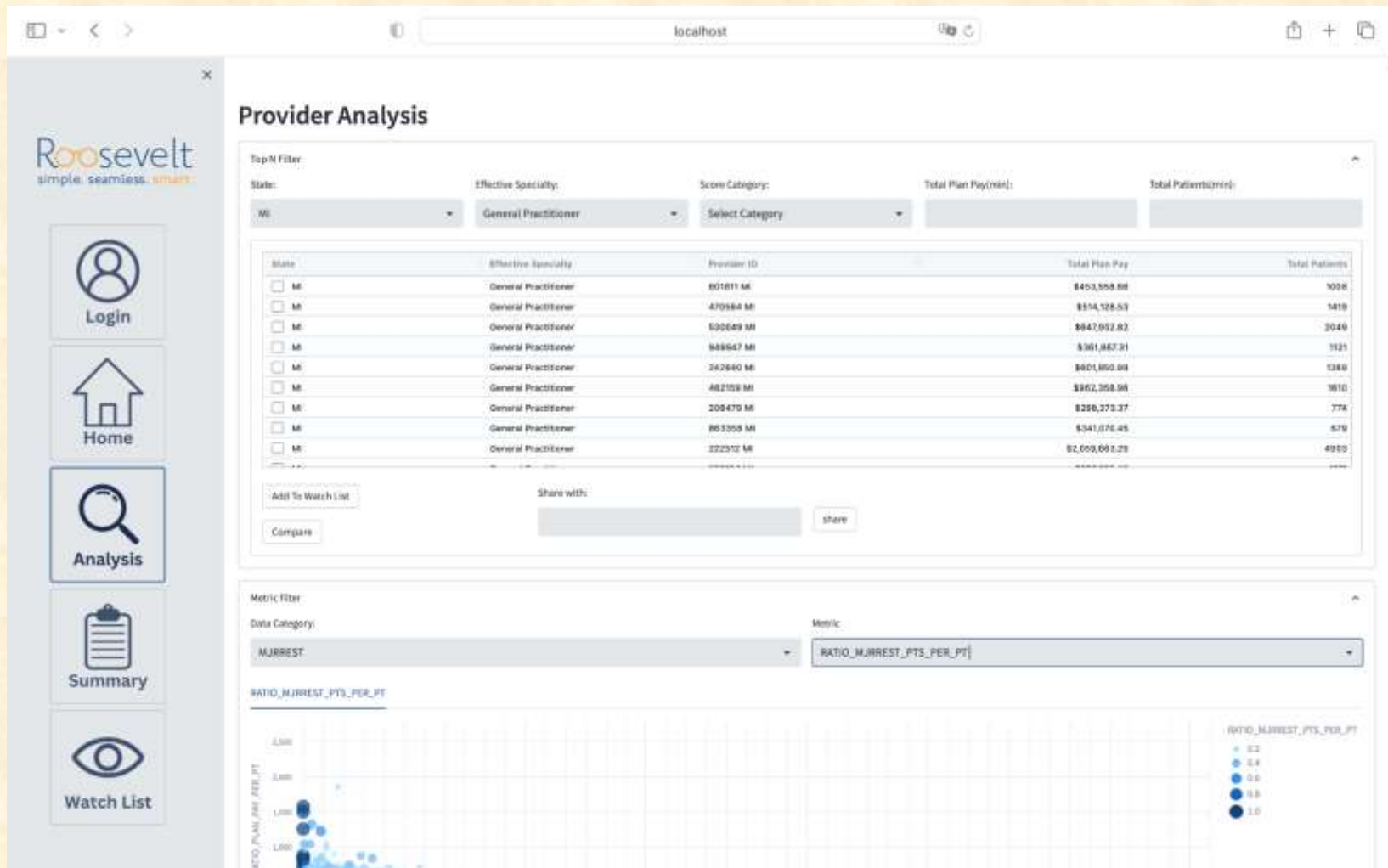
Update

Select	Name	Specialty	Provider ID	Total Plan Pay	Total Patients	Shared By User	Shared Date
<input type="checkbox"/>	MI	General Practitioner	470984 MI	\$514,128.53	1,419	bjagraj	2023-04-02
<input type="checkbox"/>	MI	Prosthodontist	882733 MI	22,032.78	72	shaazeh9	2023-04-01

**Navigation:** Login, Home, Analysis, Summary, Watch List

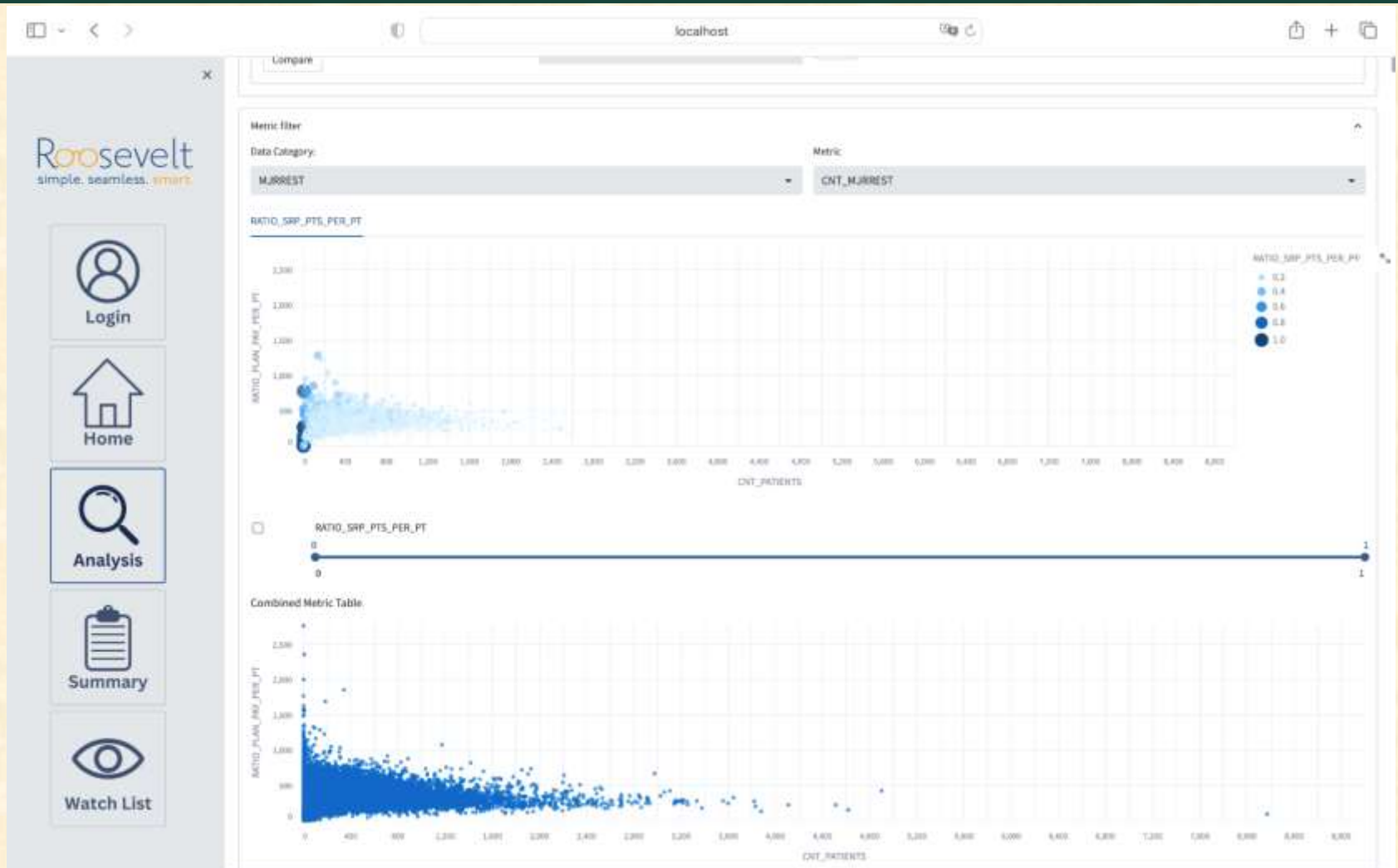


# Provider Analysis





# Provider Analysis (cont.)



# Provider Summary (provider selection)

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Navigation: Login, Home, Analysis, Summary, Watch List

## Provider Summary

**My WatchList**

PROVIDERS
207296 IN
453090 IN
291062 IN
944703 MI
917760 IN
829130 MI
407383 IN
180653 MI

**Shared WatchList**

PROVIDERS
614433 MI
982733 MI
239823 MI
601831 MI
470564 MI
949947 MI
242040 MI

Choose the Provider: 829130 MI-Aaren Hallgate

Find Provider Summary for 829130 MI

### Provider: 829130 MI

Full Name	License Speciality	License Status	Status Reason	FR Status	Primary TIN	Primary Address	Primary City
Aaren Hallgate	General Practitioner	A	No Restriction	N	18943811	117 Warrior Junction	Sterling Heights

**Overall Rank**  
2,424

**SRP Rank**  
-

**M/Rost Rank**  
680

**Fillings Rank**  
2,264

**Practice Overview**

Patients	498
Total Plan Pay	\$186,524.40
Over Blended Plan Pay	374

**Provider Usage Percentage**

0.03

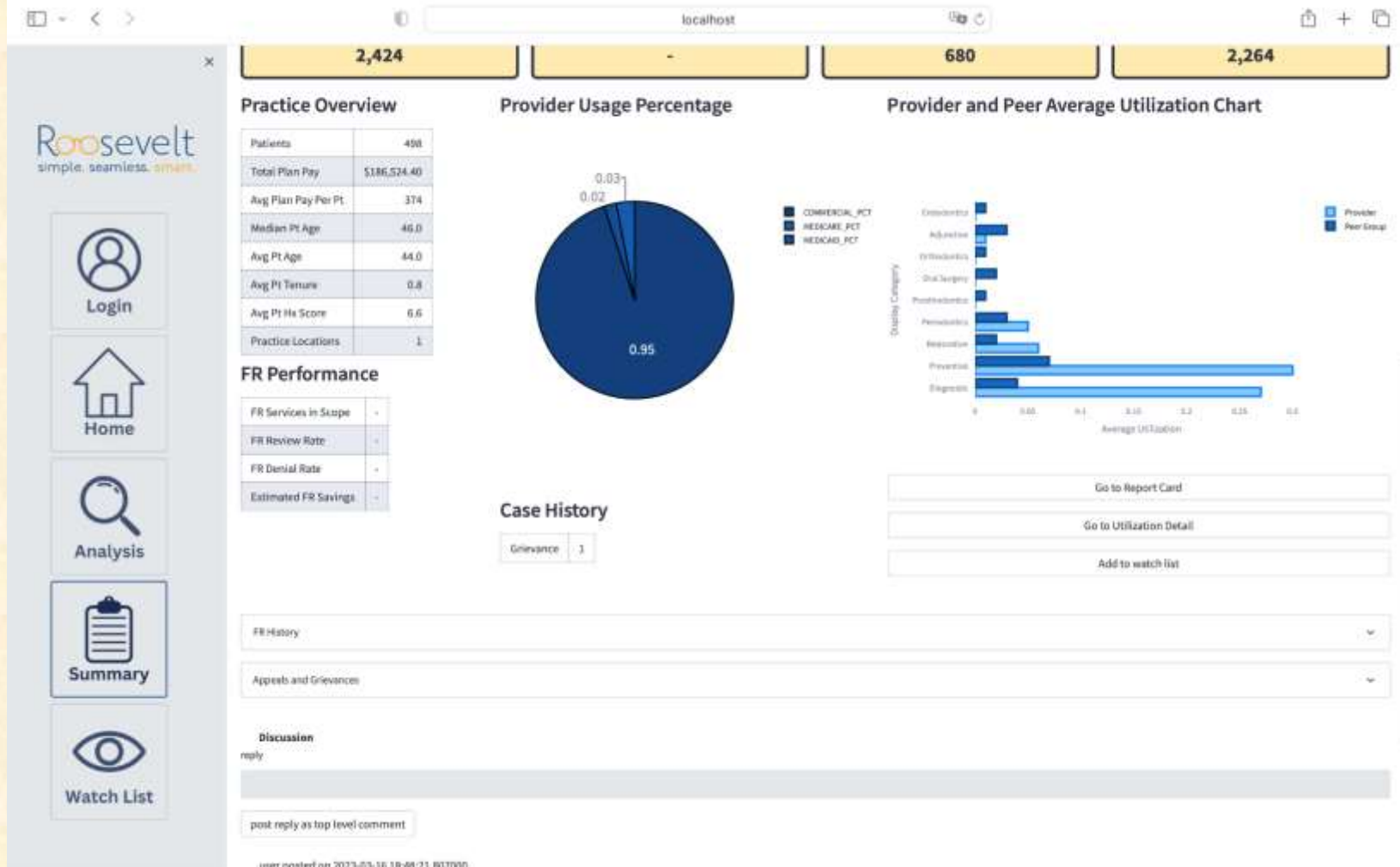
0.02

**Provider and Peer Average Utilization Chart**





# Provider Summary (charts & comments)



# Watch List

The screenshot displays the Roosevelt software interface. On the left is a navigation sidebar with icons for Login, Home, Analysis, Summary, and Watch List. The main content area is titled "Watch List" and contains a table of provider information. Below the table is a "Delete" button. A second section titled "Shared With Me" contains another table with columns for Select, State, Specialty, Provider ID, Total Plan Pay, Total Patients, Shared by User, and Shared Date. This section also includes an "Update" button above the table and a "Delete" button below it.

### Watch List

	Select	PROVIDER_ID	LICENSE_STATE_CODE	LICENSE_NUMBER	FIRST_NAME	LAST_NAME	FULL_NAME	PROVIDER_NPI_TYPE	LICENSE_STATUS_CODE	LICENSE_STATUS_REASON	PR_STATUS	SPECIALTY_DESC	PRACTICE
0	<input type="checkbox"/>	629133 MI	MI	629133	Aaren	Hallgate	Aaren Hallgate	85,816,493,151	A	No Restriction	N	General Practitioner	Home
1	<input type="checkbox"/>	644783 MI	MI	644783	Ab	Pogson	Ab Pogson	89,361,983,957	A	No Restriction	N	General Practitioner	Home
2	<input type="checkbox"/>	207296 IN	IN	207296	Thorn	Dudbridge	Thorn Dudbridge	27,501,552,813	A	No Restriction	N	General Practitioner	Home
3	<input type="checkbox"/>	977760 IN	IN	977760	Kore	Cadlake	Kore Cadlake	48,506,417,943	A	No Restriction	N	Public Health	Home
4	<input type="checkbox"/>	200062 IN	IN	201,861	Brian	Bowart	Brian Bowart	31,090,725,423	A	No Restriction	N	Prosthodontist	Home
5	<input type="checkbox"/>	453099 IN	IN	453,099	Claudia	Botha	Claudia Botha	32,637,356,673	A	No Restriction	N	General Practitioner	Home
6	<input type="checkbox"/>	180653 MI	MI	180,653	Pierrette	Harvison	Pierrette Harvison	34,333,270,521	A	No Restriction	N	Podiatrist	Podiatrist
7	<input type="checkbox"/>	407583 IN	IN	407,583	Karla	Leggen	Karla Leggen	93,761,355,647	A	No Restriction	N	Periodontist	Home

Delete

### Shared With Me

Update

Select	State	Specialty	Provider ID	Total Plan Pay	Total Patients	Shared by User	Shared Date
0	MI	General Practitioner	470964 MI	554,128.53	1,418	lsjajqj	2023-04-01
1	MI	Prosthodontist	982733 MI	22,032.78	73	zhaoche9	2023-04-01
3	MI	General Practitioner	801811 MI	453,558.86	1,008	lsjajqj	2023-04-01
3	MI	General Practitioner	242940 MI	602,850.89	1,388	lsjajqj	2023-04-01
4	MI	Prosthodontist	614433 MI	432.9	5	zhaoche9	2023-04-01
9	MI	General Practitioner	949947 MI	361,867.31	1,121	lsjajqj	2023-04-01
6	MI	Prosthodontist	239823 MI	26,532	84	zhaoche9	2023-04-01

Delete



# What's left to do?

- Stretch Goals
  - Adding the change weights feature for an admin.
  - Adding individual comparison graphs on the web applications.
  - Adding machine learning to places where it was not originally thought of.



# Questions?

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