



PATTERNS AND TRENDS IN PRO BONO SERVICES: LEVERAGING DATA ANALYTICS FOR THE AMERICAN BAR ASSOCIATION

Presented by Team 15: The Insightful Ones

AGENDA

1.Client Introduction

2.The Challenges

3.Our Insights

4.Summary of Recommendations



AMERICAN **BAR** ASSOCIATION™

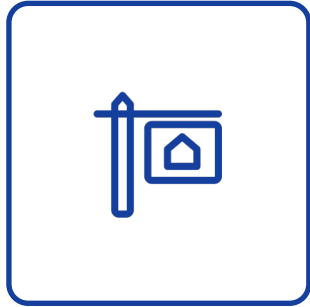
THE CLIENT:

THE AMERICAN BAR ASSOCIATION STANDING COMMITTEE ON PRO BONO & PUBLIC SERVICES

The American Bar Association is a voluntary professional organization committed to improving the legal profession and promoting access to justice.

Through its pro bono programs and initiatives, the ABA provides free legal services to underserved communities and aims to increase access to legal services for all Americans.

CLIENT'S PAINPOINTS



Lack of Awareness of their Pro
Bono Service

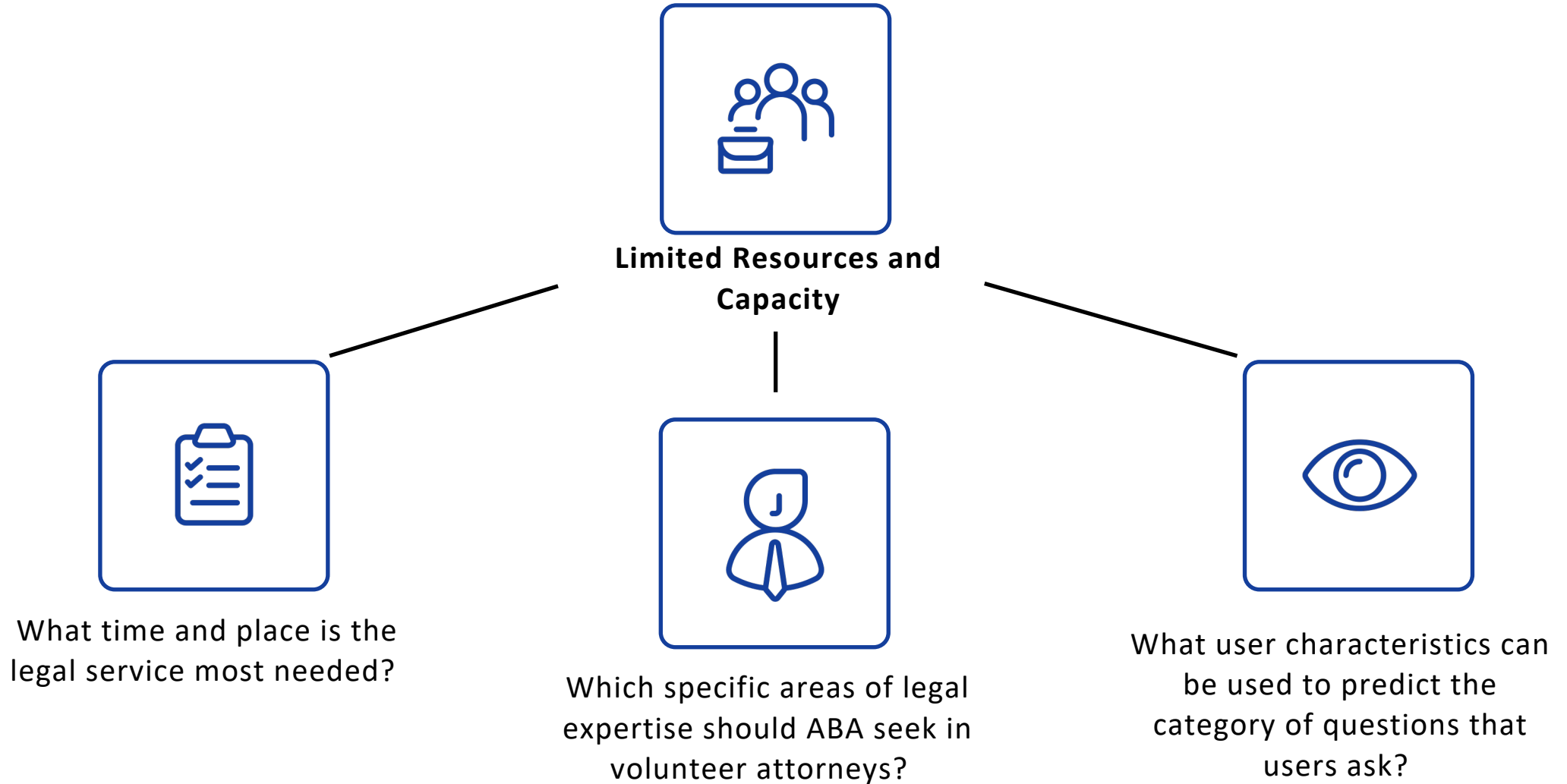


Limited Resources and
Capacity



Difficulty in Identifying
User Needs

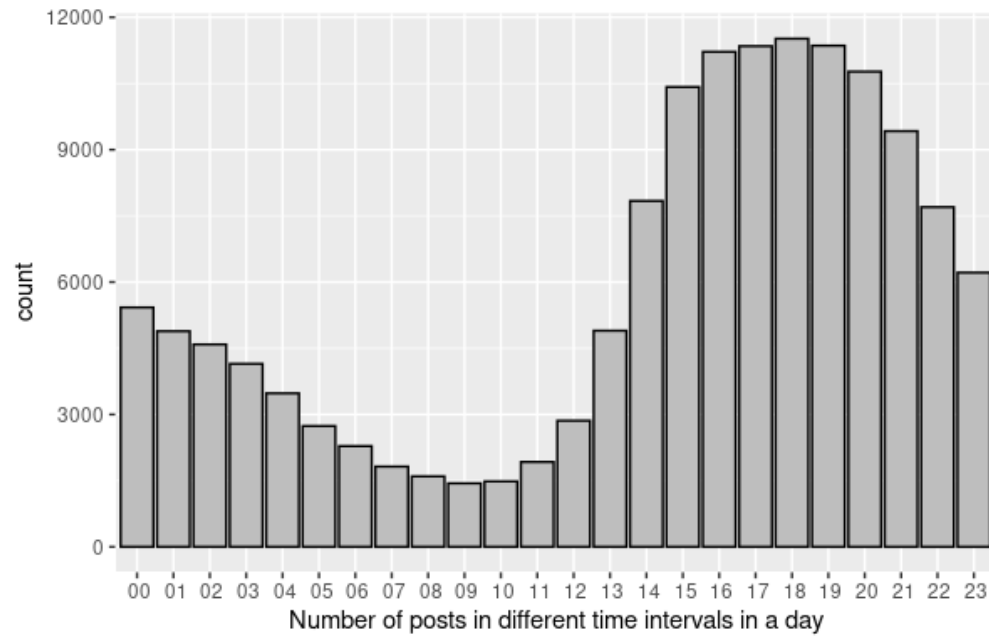
A BREAKDOWN OF THE PROBLEM



QUICK SUMMARY OF

INSIGHTS

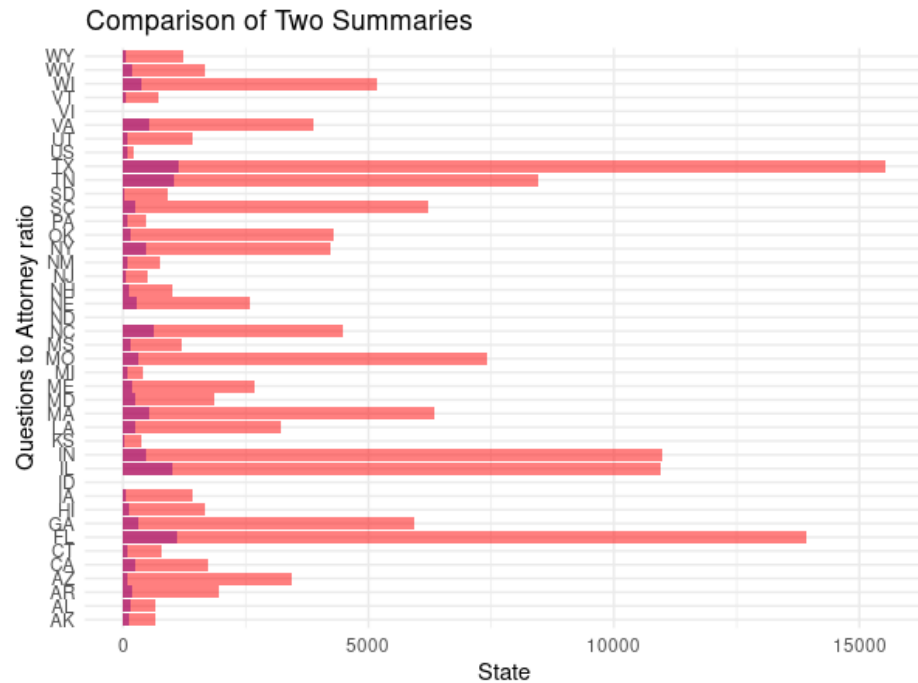
- Insight 1: High demand of legal services between 2PM and 10PM; shortage of volunteers in Texas and Florida
- Insight 2: Issues regarding Family and Children, and Housing and Homeless are becoming increasingly popular
- Insight 3: Individual rights & Income Maintenance Law are low in proportion of total number of questions but high in proportion of unanswered question.



INSIGHT 1:

Peak hours: 14:00-22:00

Recommendation: allocate more volunteers during peak times to ensure clients receive prompt responses to their inquiries



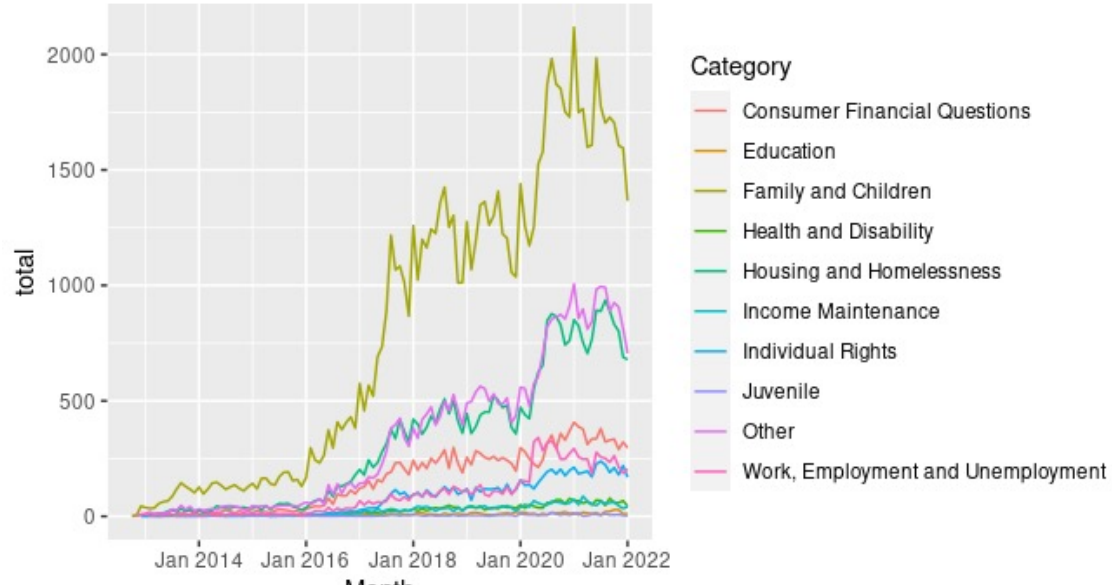
South Dakota and Arizona have the highest shortage of lawyers, each with a case-to-attorney Ratio of 34.54 and 32.91, respectively

Alabama and Pennsylvania have the lowest ratio of 4.83 and 4.95 respectively

Recommendation: promote fair distribution of legal resources to handle the caseload

INSIGHT 2

Trend of number of questions in each category for the whole country



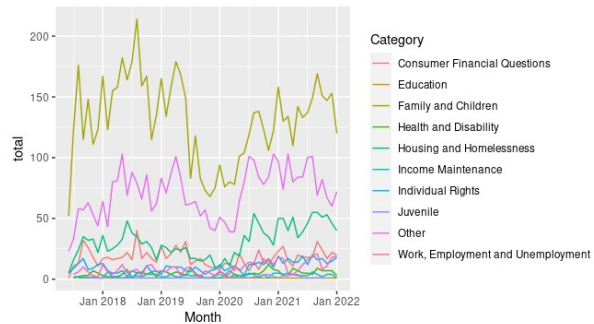
Family and children law & Housing and Homelessness law are the most frequent categories in the US.

All categories shows consistent increasing trend.

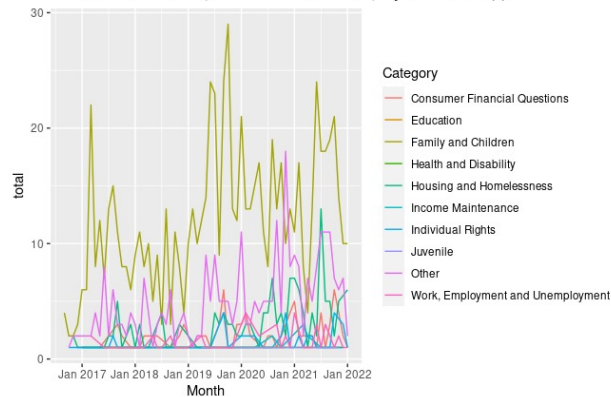
Pattern are consistent for Texas and Mississippi.

Recommendation: Hire additional attorneys who possess specific expertise in Family and children law & Housing and Homelessness law.

Trend of number of questions in each category for Texas



Trend of number of questions in each category for Mississippi



Proportions of Eligible Questions For Each Category

Category	Proportion (%)
Family & Children	45.15
Housing and Homelessness	16.71
Consumer Financial Questions	7.56
Work, Employment and Unemployment	4.75
Individual Rights	4.47
Income Maintenance	1.44
Health & Disability	1.27
Education	0.42
Juvenile	0.19
Other	18.05

INSIGHT 3

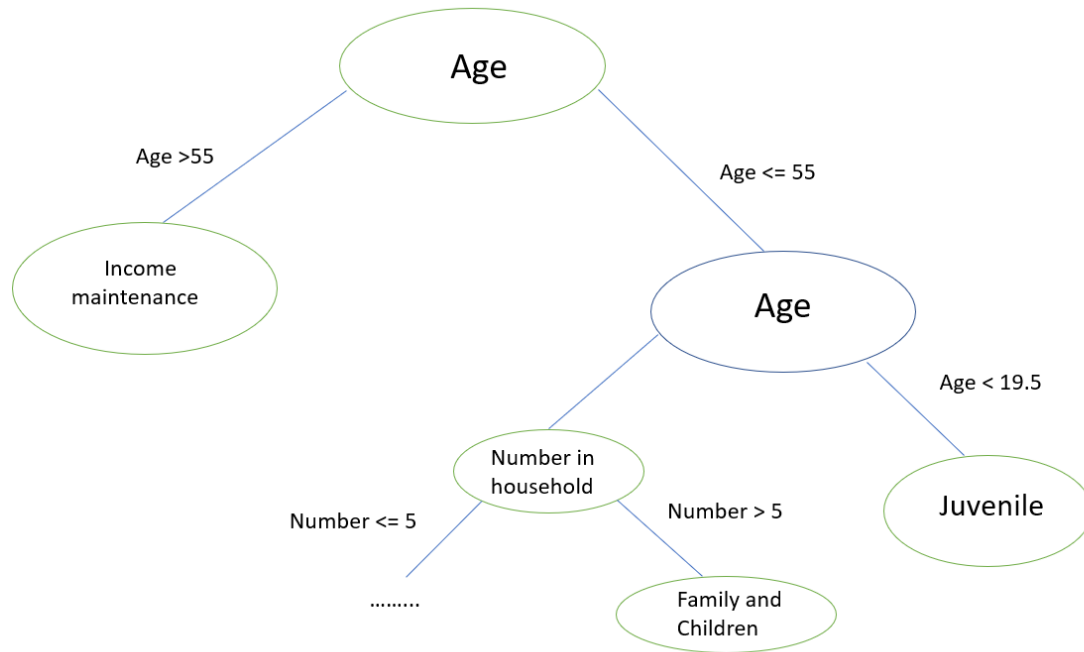
Individual rights & Income Maintenance law are low in proportion of eligible question but high in proportion of unanswered question.

Recommendation: Introduce training programs that focus on developing law skills in Individual Right & Income Maintenance.

Proportions of Unanswered Questions For Each Category

Category	Proportion (%)
Individual Rights	40.34
Income Maintenance	38.47
Juvenile	37.79
Health & Disability	35.62
Education	34.40
Work, Employment and Unemployment	28.36
Family & Children	26.66
Consumer Financial Questions	23.66
Housing and Homelessness	23.62
Other	33.12

THE PREDICTION MODEL



1. Aim to predict potential clients' question category based on their characteristics

2. Specifically focused on Linear Discriminant Analysis and Quadratic Discriminant Analysis to classify

3. Estimated classification rule based on age and number of people in household yields a leave-one-out CV error rate of 46.5%

Limitations

1. Normality assumptions could be violated due to nature of data

2. Unbalanced data could lead to worse prediction accuracy for future data for our classification rule

SUMMARY OF RECOMMENDATIONS

- Recommendation 1: Assign additional volunteers during the hours of 2-10 PM and adjust the number of attorneys in each state based on the question-to-attorney ratio
- Recommendation 2: Hire additional attorneys with specific expertise in Family and Children law & Home and Homelessness law.
- Recommendation 3: Introduce training programs to develop skills in Individual Right & Income Maintenance law.
- Recommendation 4: Develop more accurate and robust algorithm to better predict and assist attorney in solving the client's problem

THANK YOU