

# Intellectual Property Law Sector in Selected US States

(New York, Illinois, Michigan, and Pennsylvania)

Understanding the career trajectories and demographic composition of IP professionals in relation to their educational backgrounds is essential for improving recruitment and retention strategies.

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# Agenda

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# Project Objective

To examine the demographic composition within senior positions in the US intellectual property law sector, with a particular focus on the representation of women, ethnic minorities, and individuals from disadvantaged backgrounds among Partners and other leadership roles.

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# Project Background

Importance of Intellectual  
Property Law

## Importance of Intellectual Property Law

Intellectual Property (IP) law is crucial for fostering innovation and creativity by protecting creators' rights, ensuring financial benefits for inventors, and promoting economic growth.

For Fellows & Associates, understanding the demographics and educational backgrounds of IP professionals in key states is essential for developing strategies to recruit and retain top talent in this vital legal sector.

# Project Focus

Selected States  
Demographics and Personal  
Details

## Selected States

New York (NY)/ Illinois (IL)/ Michigan (MI)/  
Pennsylvania (PA)

- ❑ Potentially valuable insights due to their proximity to the centers of business and finance in the US, and the presence of prestigious Ivy League schools
- ❑ Evident synergy among these states in their interconnected economies and shared cultural dynamics, creating a robust and dynamic regional network

## Demographics and Personal Details

- ❑ Demographics: Gender, Race
- ❑ Personal Details: Career Title, Alma Mater (Undergraduate and Law Degrees), Graduation Year of Law Degrees



# Research Questions

## Geographic Retention of IP Attorneys

- Do IP attorneys in senior and leadership roles who study for their law degrees in a particular state tend to work in that state?

## Prevalence of Ivy League Education

- Do most IP attorneys in senior and leadership roles attend Ivy League schools for their law degrees?

## Demographic Distribution in Different Career Roles

- What is the demographic (race, gender) distribution of the IP attorneys in senior and leadership roles across different states and overall?



# Data Collection and Methodology

## Dataset Description

This dataset provides comprehensive information on the demographics and career trajectories of intellectual property (IP) law professionals working in New York, Illinois, Michigan, and Pennsylvania. The dataset is designed to facilitate analysis of geographic retention, educational backgrounds, and demographic distribution in senior roles within the IP law sector.

## Sources

- **BCG Attorney Search:** A legal recruitment firm offering detailed data on attorneys, filtered by practice areas and cities.
- **Chambers:** A respected source for legal rankings and profiles of top lawyers and law firms.
- **Martindale-Hubbell:** A legal directory providing extensive profiles of legal professionals.



# Data Collection and Methodology

## Data Collection

Data was manually inputted into a spreadsheet from various sources and later consolidated. We also utilized data collected by a previous student group from UC Riverside, updating and filling in information to ensure it was current up to 2024 for New York (NY) and Illinois (IL).

Additionally, we collected new data for Michigan (MI) and Pennsylvania (PA) to expand the dataset.

## Coverage

- Geographic: New York (NY), Illinois (IL), Michigan (MI), and Pennsylvania (PA).
- Records: Approximately 1,400 records of IP professionals.
- Time Period: Various years, with the most recent data up to 2024.



# Data Collection and Methodology

## Variables

Column Name	Data Type	Description
First Name	Categorical	First name of the attorney
Last Name	Categorical	Last name of the attorney
Firm Name	Categorical	Name of the firm where the attorney is employed
Other Practices	Binary	Whether the attorney has other practices (0: No, 1: Yes)
Race	Categorical	Race of the attorney (e.g., White, Person of Color)
Sex	Binary	Gender of the attorney (0: Male, 1: Female)
City	Categorical	City where the attorney is based

Column Name	Data Type	Description
State	Categorical	State where the attorney is based
Career Level	Categorical	Career level of the attorney
Attorney	Binary	Whether the individual is an attorney (0: No, 1: Yes)
Law School	Categorical	Name of the law school attended by the attorney
Undergrad	Categorical	Name of the undergraduate institution attended by the attorney
Years of Experience	Discrete	Number of years of experience the attorney has
Graduation Year of Law School	Discrete	Year the attorney graduated from law school

# Data Collection and Methodology

## 1. Data Cleaning

- **Remove Duplicates:** Ensured unique records by removing duplicates.
- **Handle Missing Values:** Imputed missing values using mean imputation for numerical data.
- **Standardize Formats:** Standardized formats for categorical data (e.g., career levels, universities).

## 2. Feature Selection

- **Relevance:** Selected relevant features based on domain knowledge.
- **Column Filtering:** Retained columns essential for analysis, such as demographics and educational background.

## 3. Data Transformation

- **Career Level Grouping:** Grouped career levels into numeric categories for analysis.
- **Ivy League Identification:** Created a binary column to identify Ivy League institutions.

## 4. Exploratory Data Analysis (EDA)

- **Visualizations:** Created visualizations to understand distributions and relationships in the data.
- **Statistical Analysis:** Conducted preliminary statistical analysis to identify key trends.

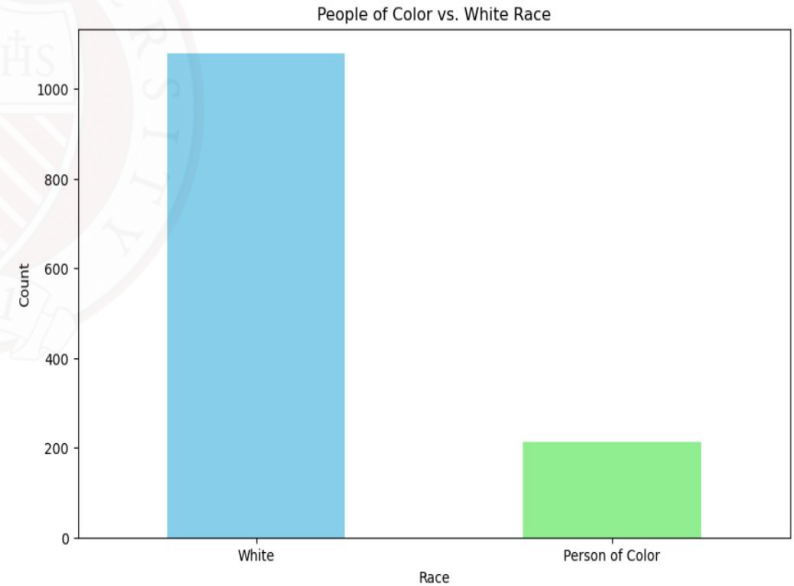
# Race Proportion

Distribution of Racial Groups Graph

## Distribution of Racial Groups:

Person of Color = ~16%

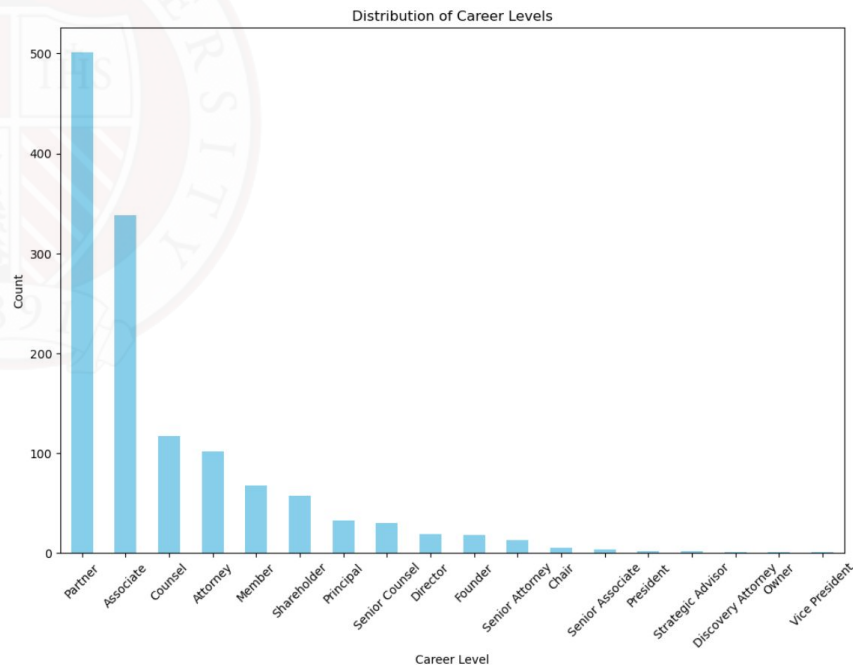
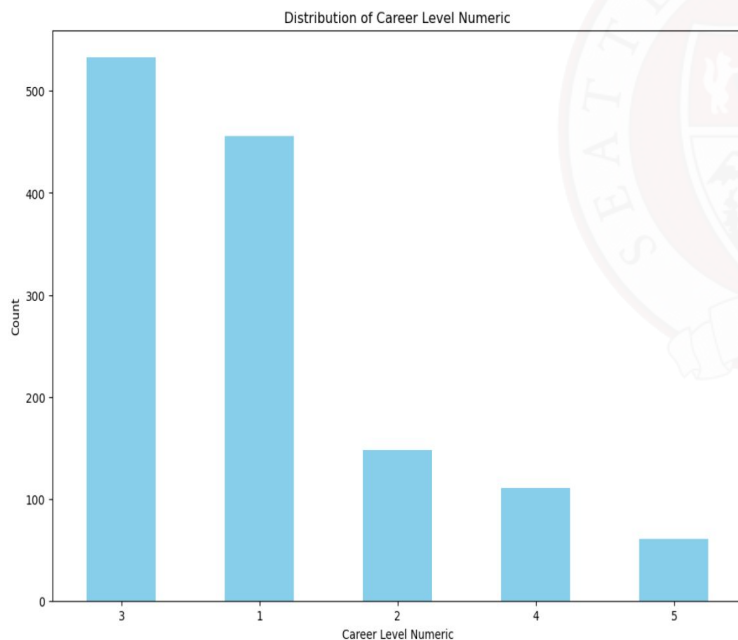
White = ~84%



## Findings: Career Level Distribution

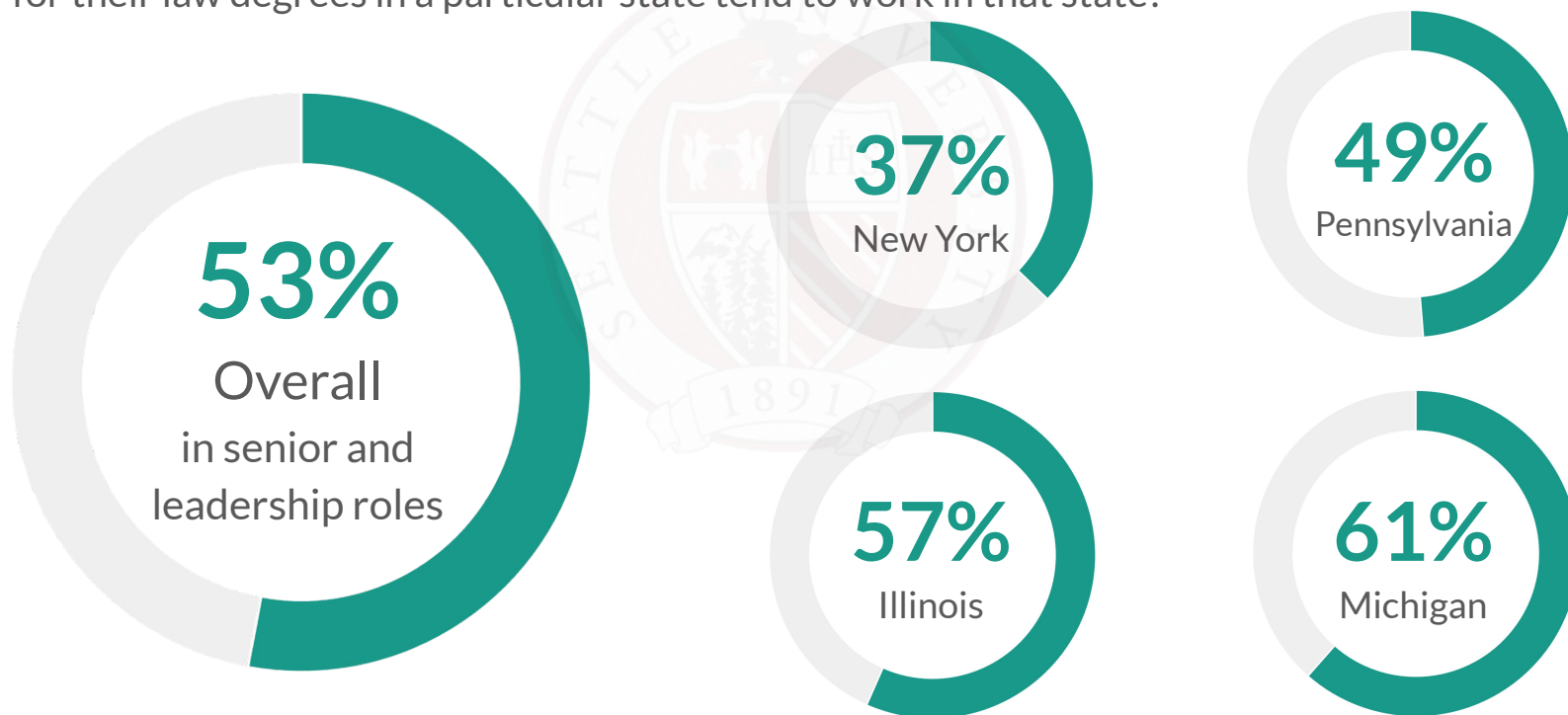
### Career Level Classification

- 1 = Entry and Junior Level Positions
- 2 = Intermediate Level Positions
- 3 = Senior Level Positions
- 4 = Leadership and Executive Role Positions
- 5 = Miscellaneous Positions



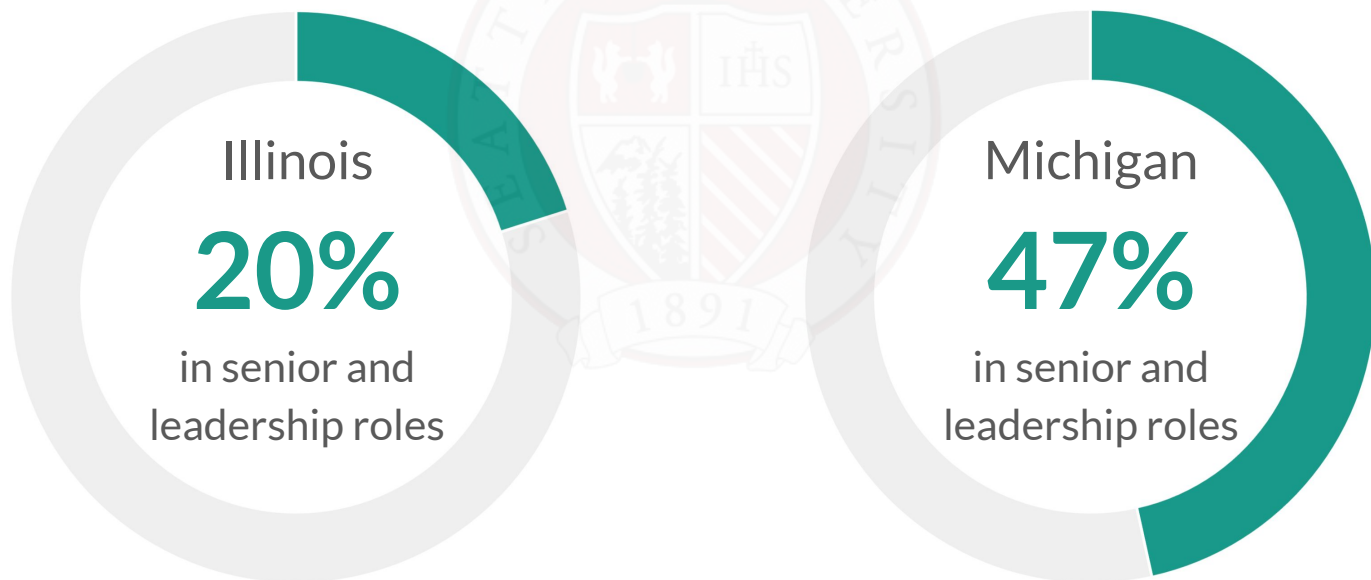
# In-state Law Degrees in Senior and Leadership Roles

**Geographic Retention of IP Professionals:** Do IP attorneys in senior and leadership roles who study for their law degrees in a particular state tend to work in that state?



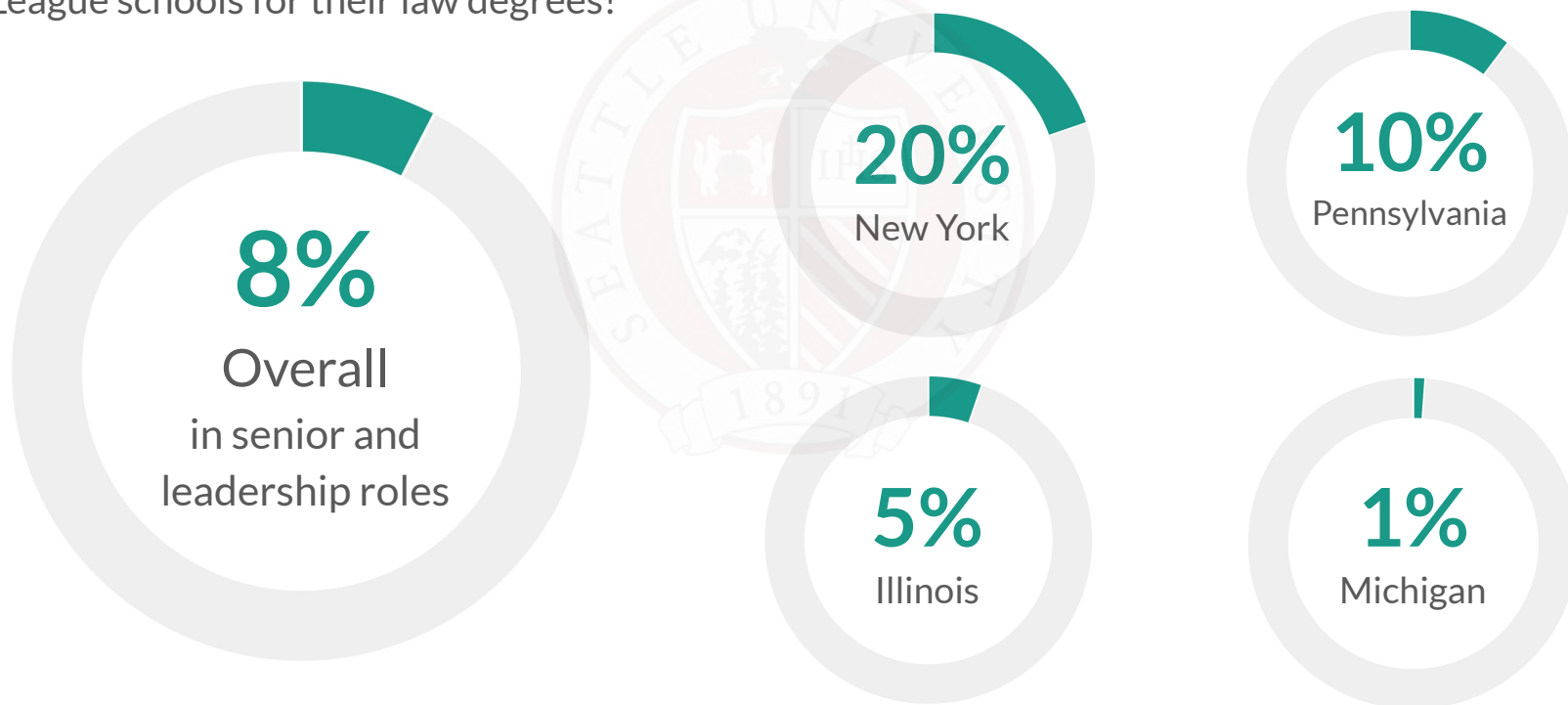
# In-state Undergrad AND Law Degrees in Senior and Leadership Roles in Illinois and Michigan

**Geographic Retention of IP Professionals:** Do IP attorneys in senior and leadership roles who study for their law degrees in a particular state tend to work in that state?



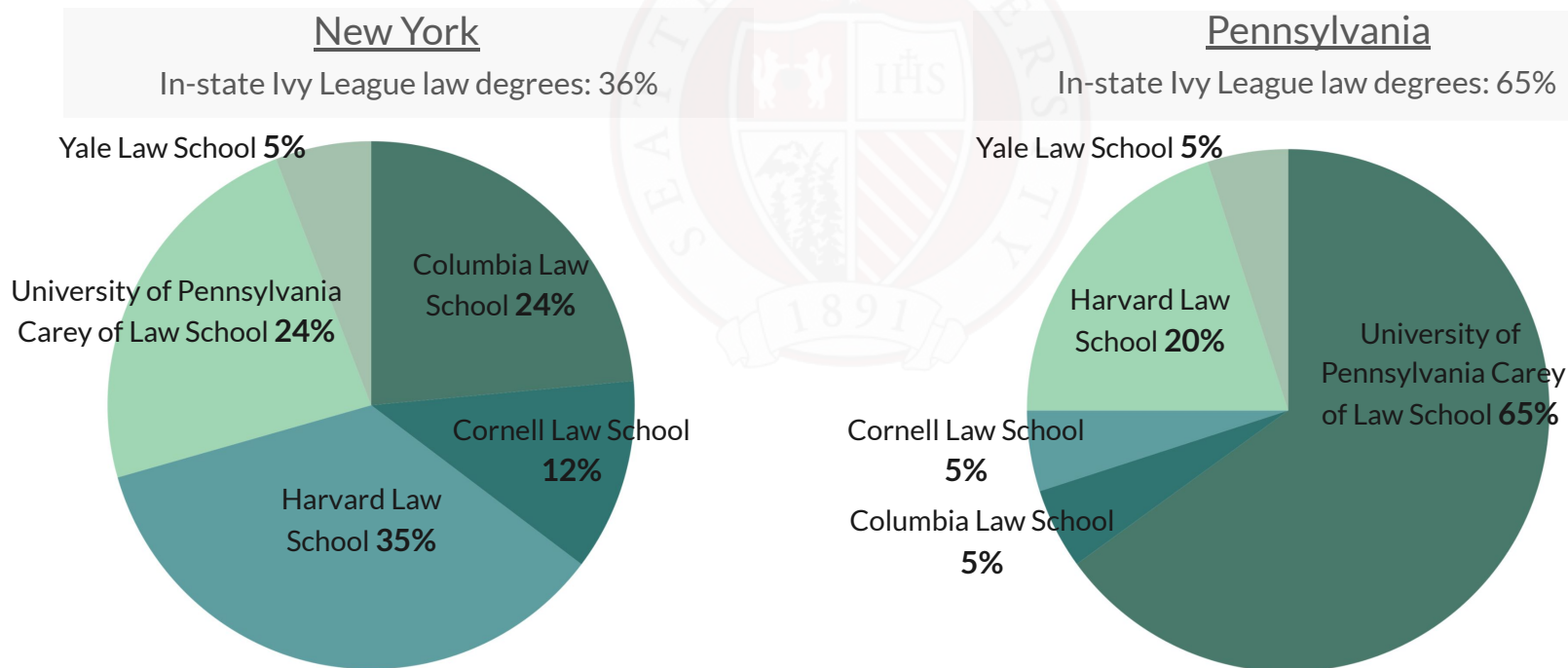
# Ivy League Law Degrees in Senior and Leadership Roles

**Prevalence of Ivy League Education:** Do most IP attorneys in senior and leadership roles attend Ivy League schools for their law degrees?



# Ivy League Law Degrees in Senior and Leadership Roles in New York and Pennsylvania

**Prevalence of Ivy League Education:** Do most IP attorneys in senior and leadership roles attend Ivy League schools for their law degrees?

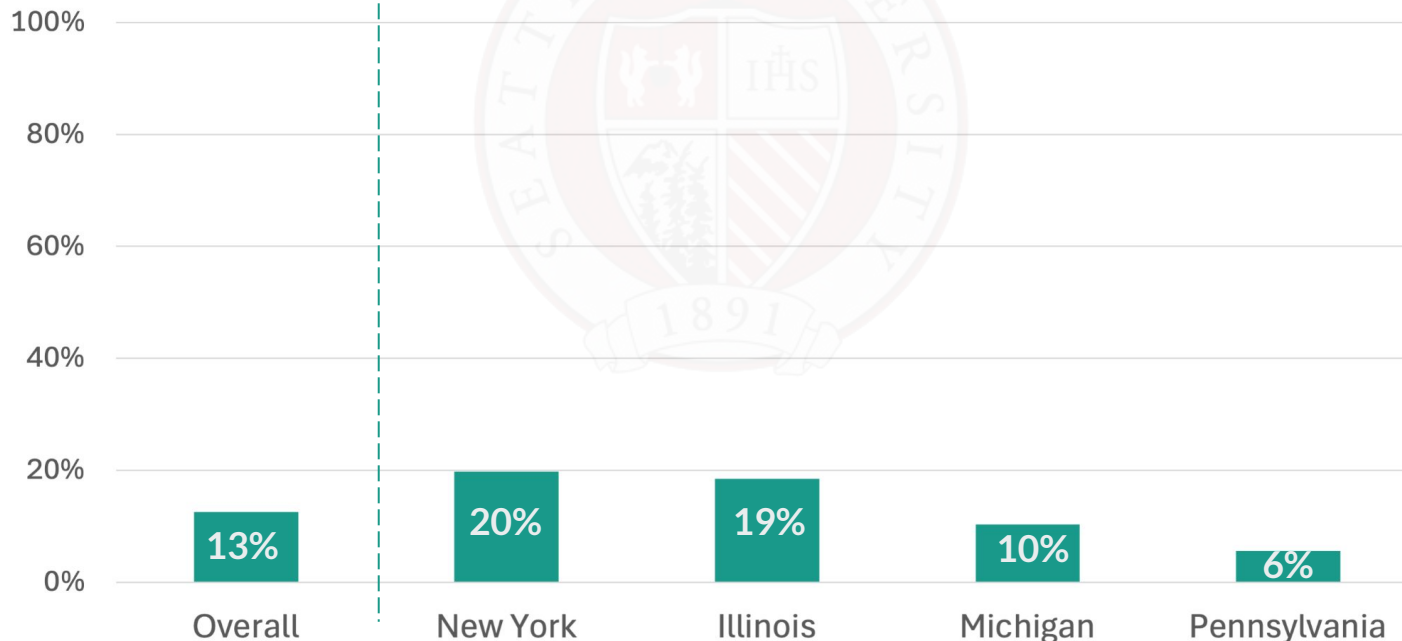




# Race Distribution in Senior and Leadership Roles

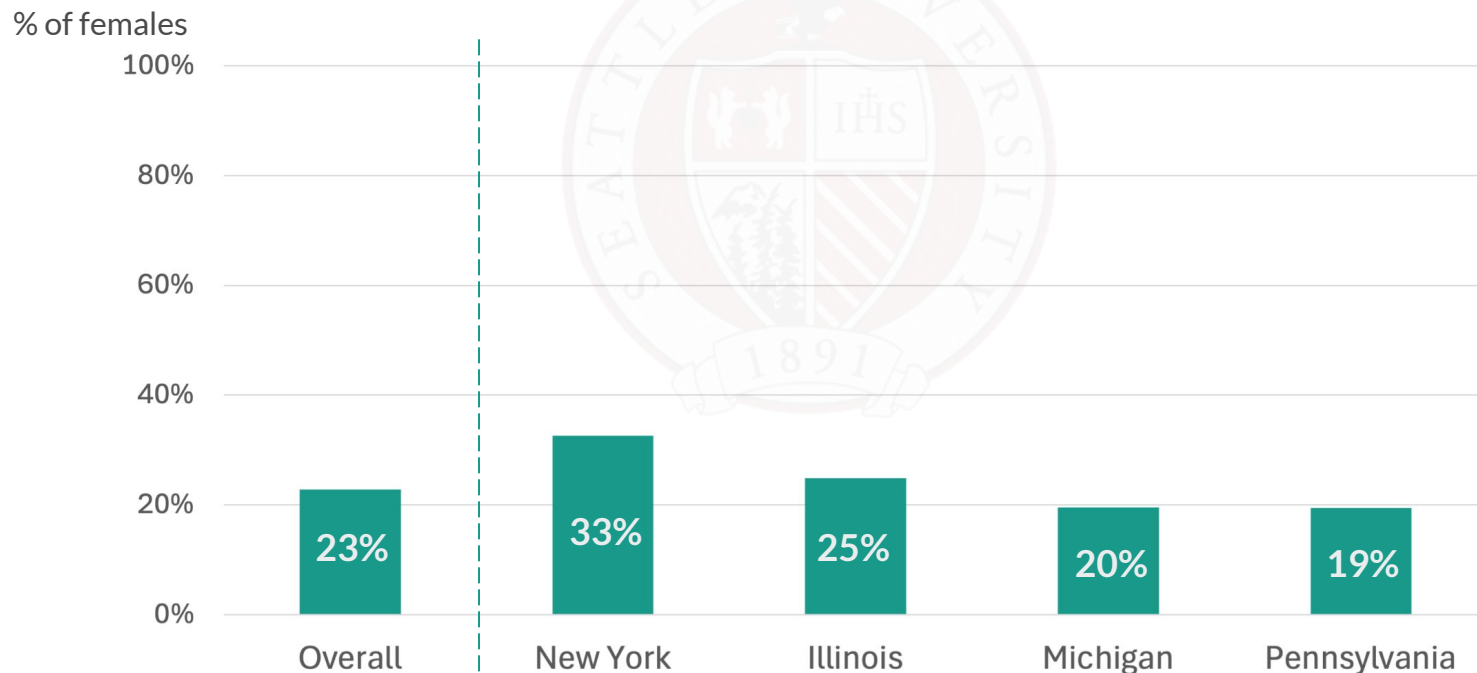
**Demographic Distribution in Different Career Roles:** What is the demographic distribution of the IP attorneys in senior and leadership roles across different states and overall?

% of People of Color



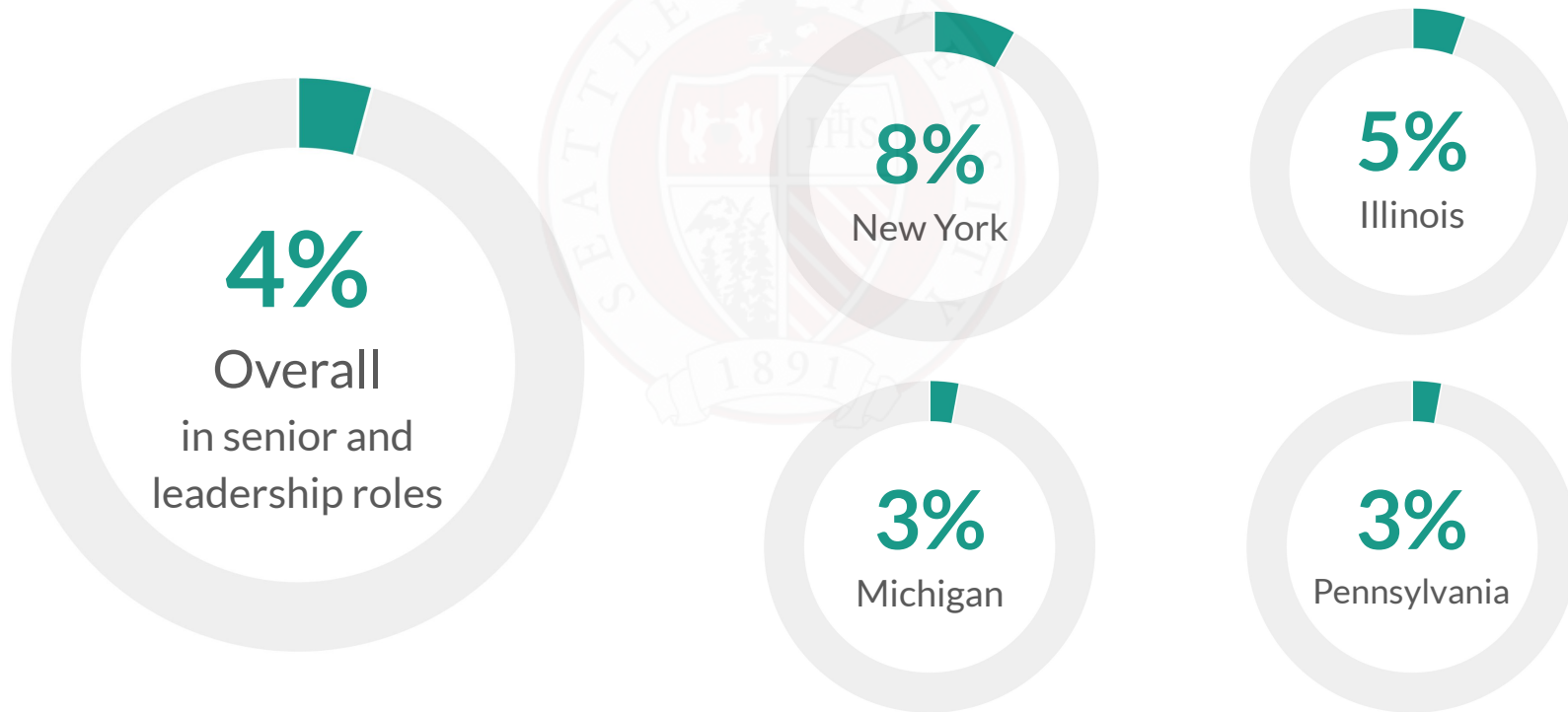
# Gender Distribution in Senior and Leadership Roles

**Demographic Distribution in Different Career Roles:** What is the demographic distribution of the IP attorneys in senior and leadership roles across different states and overall?



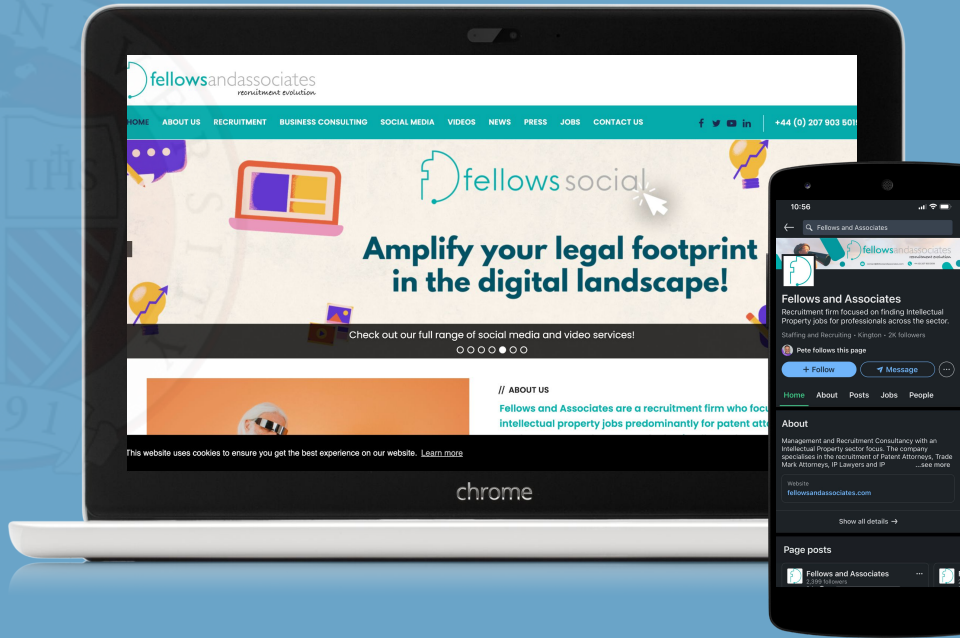
# Women of Color in Senior and Leadership Roles

**Demographic Distribution in Different Career Roles:** What is the demographic distribution of the IP attorneys in senior and leadership roles across different states and overall?



# Thank You!

Any question?





## Recap of Analysis Results

1. Do IP attorneys in senior and leadership roles who study for their law degrees in a particular state tend to work in that state?

**Ans:** Overall, over half of the IP attorneys in senior and leadership roles in the four states we analyzed worked in the same state where they obtained their law degrees. Illinois and Michigan showed higher retention rates — around 60% of IP attorneys in senior and leadership roles obtained their law degrees in the same state. In Michigan, almost half of these attorneys also completed their undergraduate degrees there.



## Recap of Analysis Results

2. Do most IP attorneys in senior and leadership roles attend Ivy League schools for their law degrees?

**Ans:** Less than 10% of the IP attorneys in senior and leadership roles in the four states we analyzed obtained their law degrees from Ivy League schools. In states with Ivy League institutions, New York and Pennsylvania, the percentage is significantly higher. In New York, over one-third of Ivy League law degree holders graduated from in-state schools (Columbia Law School and Cornell Law School). In Pennsylvania, around two-thirds graduated from the University of Pennsylvania Law School. Notably, Harvard Law School constitutes a significant portion of Ivy League law degree holders in both states (35% in New York and 20% in Pennsylvania).



## Recap of Analysis Results

3. What is the demographic (race, gender) distribution of the IP attorneys in senior and leadership roles across different states and overall?

**Ans:** Overall, people of color (13%) and women (23%) are underrepresented among IP attorneys in senior and leadership roles in the four states we analyzed. This highlights a significant challenge in achieving diversity in race and gender. Concerted efforts, including promoting DEI (Diversity, Equity, and Inclusion) and creating environments for equal opportunities, are necessary.



# Limitations

- **Data Quality:** We leveraged data collected by a previous student group for New York and Illinois, while we manually collected data for Pennsylvania and Michigan. Data accuracy might be an issue due to human errors and misinterpretation. Additionally, our access was limited to public sources, which may not always provide the most up-to-date information. Therefore, extra effort was required for data preprocessing to ensure the data was high quality and ready for analysis.
- **Time Constraints:** Given the eight-week project timeline, we had to carefully allocate our time for data collection and analysis. We needed to communicate with our client to define a manageable scope, created a detailed project timeline, and set strict time limits for each task, particularly the time-consuming manual data collection process.



# Meet our team

- We are conducting this analysis for our clients, Fellows and Associates, focusing on the Intellectual Property Law sector in selected US states, specifically New York, Illinois, Michigan, and Pennsylvania. Our goal is to provide actionable insights that will enhance their strategic planning and decision-making processes.

## Background

We are students from Seattle University, pursuing a Master of Science in Business Analytics (MSBA). This project is part of our Capstone project, where we apply our academic knowledge to real-world problems.

## Team Members

- Amy Thamniyom
- Kelly Tsang
- Nick Helm
- Swati Srivastava

## About Fellows and Associates



- ❖ Fellows and Associates is a specialist consultancy in intellectual property law, recruitment, social media, and business. The company recruits patent attorneys, trademark lawyers, IP lawyers, and other IP professionals (such as business development, executive management, and senior paralegals) internationally, offering executive search, project management, and contingent models. Its social media arm, Fellows Social, provides advice and content for firms looking to expand their business-to-business offerings. Additionally, the company's consultancy division offers bespoke advice on areas such as firm mergers and acquisitions. For more information, please visit [Fellows and Associates](#).



# References

- ❑ BCG Attorney Search:  
<https://www.bcgsearch.com/bestlawfirms/pa-47-loc-2655979/texas/dallas/intellectual-property>
- ❑ Chambers: <https://chambers.com/legal-guide/usa-5>
- ❑ Martindale-Hubbell: <https://www.martindale.com/>

# Appendix 1 - Data breakdown by states and cities

State/City	No. of obs	% of total obs	% of state obs
<b>Illinois</b>	<b>323</b>	<b>25%</b>	
Chicago	323	25%	100%
<b>Michigan</b>	<b>371</b>	<b>28%</b>	
Troy	59	5%	16%
Ann Arbor	58	4%	16%
Grand Rapids	55	4%	15%
Detroit	49	4%	13%
Birmingham	29	2%	8%
Royal Oak	24	2%	6%
Other cities	97	7%	26%
<b>New York</b>	<b>176</b>	<b>13%</b>	
New York	164	13%	93%
Other cities	12	1%	7%
<b>Pennsylvania</b>	<b>439</b>	<b>34%</b>	
Philadelphia	281	21%	64%
Pittsburgh	123	9%	28%
Other cities	35	3%	8%
<b>Total</b>	<b>1,309</b>		



# Appendix 1 - Grouping of Career Titles



## Level of Career

### Entry and Junior Level

Associate  
Attorney  
Senior Attorney  
Senior Associate

### Intermediate Level

Counsel  
Senior Counsel  
Discovery Attorney

### Senior Level

Partner  
Principal

### Leadership and Executive Level

Chair  
Director  
Founder  
Member  
President

### Others

Owner  
Vice President  
Strategic Advisor  
Patent Agent  
Shareholder



## Appendix 3 - List of Ivy League Schools

School Name	State	Have Law School?
Brown University	Rhode Island	No
Columbia University	New York	Yes
Cornell University	New York	Yes
Dartmouth College	New Hampshire	No
Harvard University	Massachusetts	Yes
University of Pennsylvania	Pennsylvania	Yes
Princeton University	New Jersey	No
Yale University	Connecticut	Yes

## Appendix 4 - In-state Undergraduate and Law Degree overall and by state

	% In-state Law Degree		% In-state Undergrad AND Law Degree	
	Overall	Senior & Leadership Roles	Overall	Senior & Leadership Roles
<b>Overall</b>	<b>55%</b>	<b>53%</b>	<b>31%</b>	<b>29%</b>
Illinois	55%	57%	19%	20%
Michigan	67%	61%	51%	47%
New York	37%	37%	15%	19%
Pennsylvania	51%	49%	29%	26%

## Appendix 5 - Ivy League Law Degree overall and by state

	% Ivy League Law Degree	
	Overall	Senior & Leadership Roles
<b>Overall</b>	<b>7%</b>	<b>8%</b>
Illinois	5%	5%
Michigan	1%	1%
New York	20%	20%
Pennsylvania	8%	10%