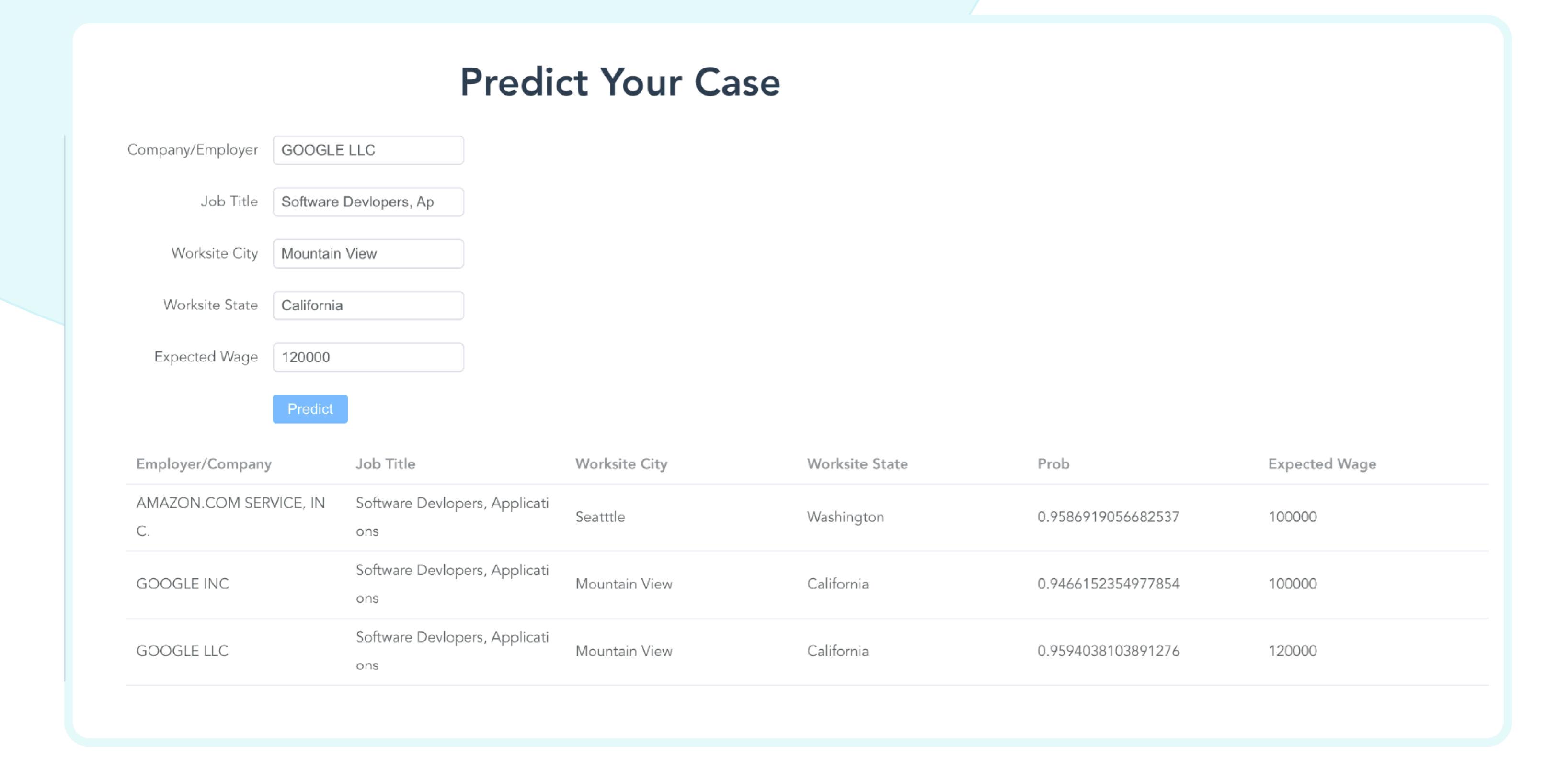


Get your prediction of H1-B visa application!

Introduction

The United States Person in Specialty Occupation Visa, more commonly known as the H1-B visa, is a non-immigrant visa that allows US employers to temporarily employ foreign workers in one of many key occupations.

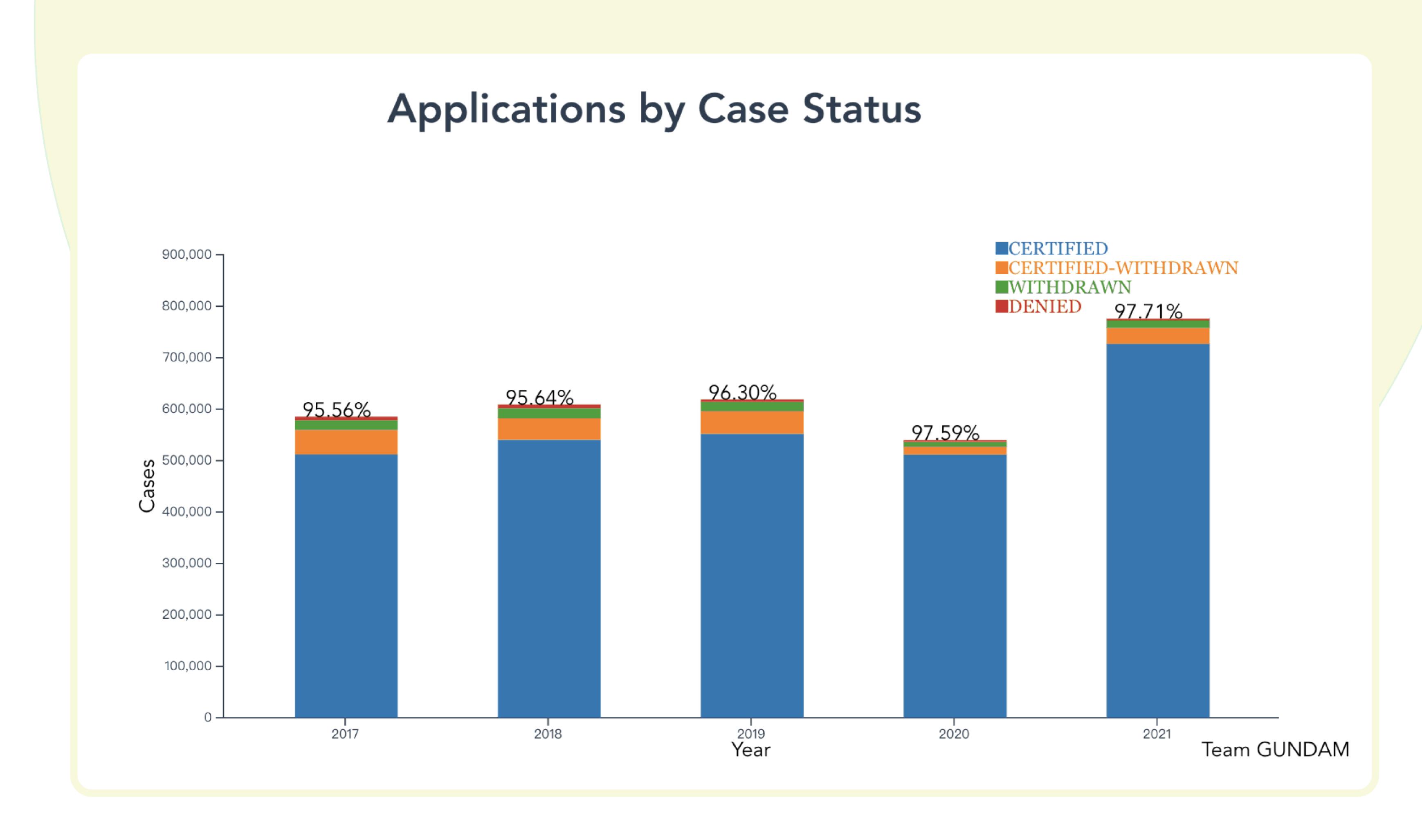
Recent studies and aggregators are commonplace, but they tend to lack meaningful visualizations of current trends. We seek to understand recent hiring trends among US employers, identify key areas of job growth, and help potential work visa applicants increase their likelihood of getting accepted by choosing their best career path.

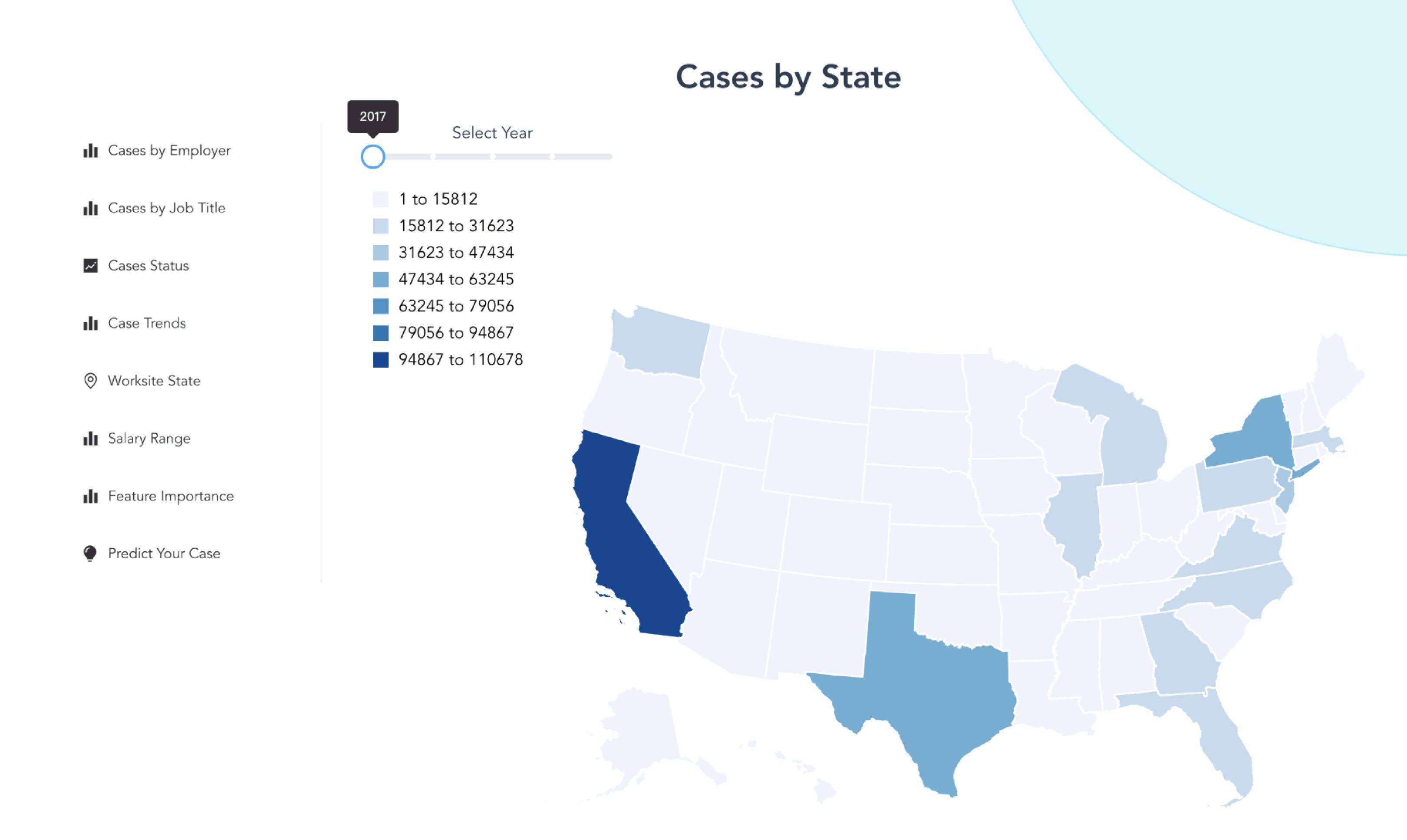


Our Approach

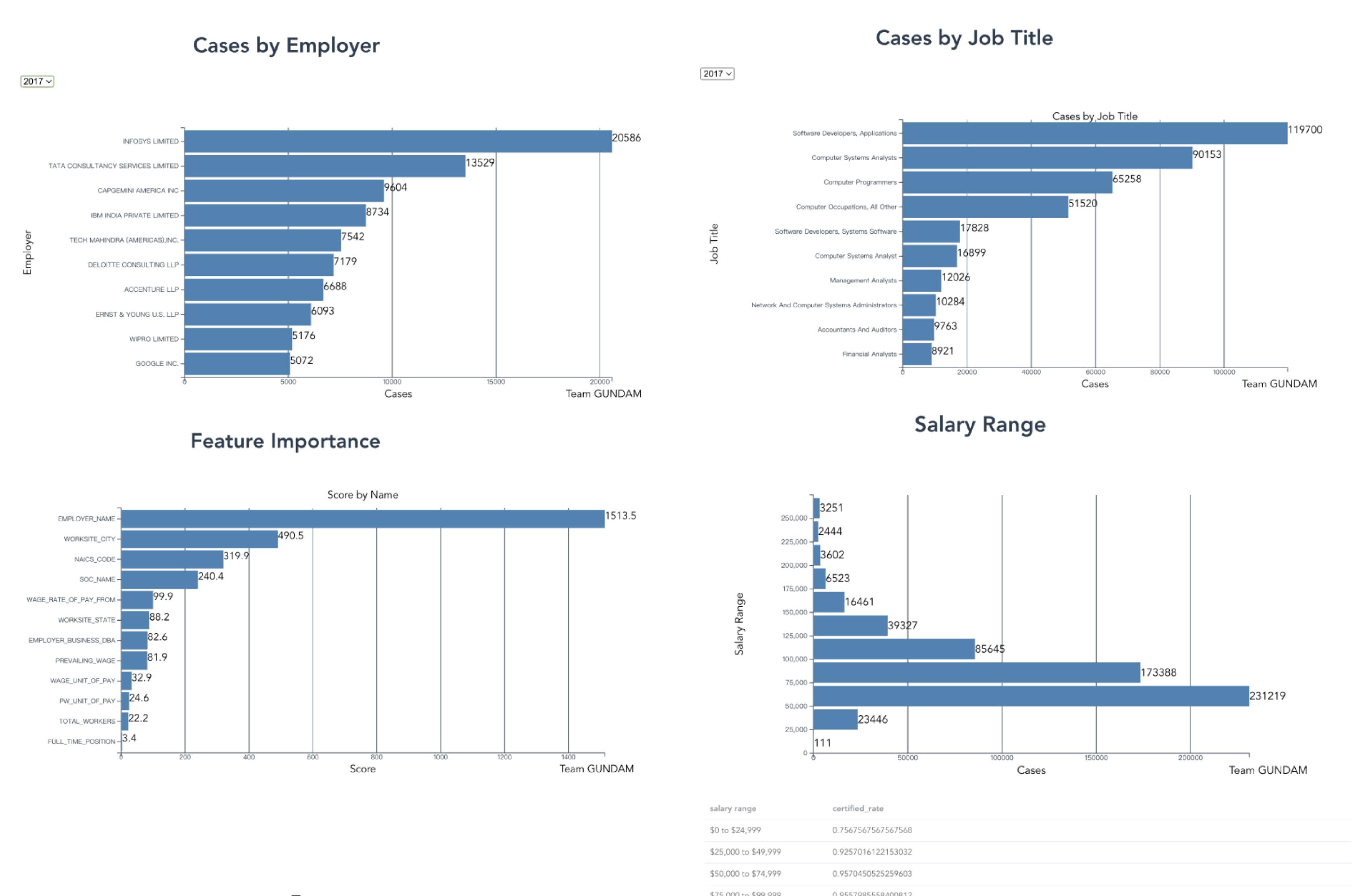
Over 3 million H1-B application records from years 2017-2021 is collected in XLS format from US Department of Labor, wrangled and condensed to relevant features with OpenRefine, and cleaned of input errors and inconsistencies using Pandas.

We compared each year's total amount of applications and results by employer, SOC job title, salary range, and US state, integrating all visualizations into one web application.





We then leverage these insights to train a gradient-boosted decision tree classifier, LightGBM, which takes user input parameters such as employer, job location, and expected salary, returning the expected likelihood of obtaining certification by the US DOL with over 95% confidence.



Results

Top 3 States: California, Texas, and New York Top job: Software Developers, Applications Top 3 employers: Infosys, Deloitte, Cognizant

Feature Importance	
Feature	Score
Employer Name	1513.5
Worksite City	490.5
NAICS Code	319.9
SOC Name	240.4
Wage Rate of Pay - From	99.9
Worksite State	88.2
Employer Business DBA	82.6
Prevailing Wage	81.9
Wage Unit of Pay	32.9
Prevailing Wage Unit of Pay	24.6
Total Workers	22.2
Full Time Position	3.4

Employer and worksite city have the greatest impact on application results.