H-1B Visa Application Data – Further Analysis Options

option	use case	methodology	effort
Can we predict application outcome (certified vs. denied) using this data?	Understand significant factors in application decision-making process Optimize applications for approval	Identify & structure potential predictor variables (predictor variables (employment duration, SOC code, proposed wage, FT vs. PT, number of workers, location) Develop regression model to predict application success Explore correlations between predictor variables and application outcome to see if any are significant	High
What is the distribution of visa applications and how has it changed over time?	Illustrate where foreign workers are moving to the most in the US and shifts over time	Plot heat map of visa applications across US geography and compare YoY to identify shifts in demographics and concentration of applications	Medium
How long does it typically take to reach a decision and why might it vary?	Understand what factors (if any) impact variance in decision-making time	Calculate difference between submit date and decision date Assess relationships between time span and occupation groups, job titles, # of workers, etc.	Medium
What are the most common/high-growth occupational groups?	Better understand what roles these applicants are filling	Use # of workers and YoY changes to illustrate trends/shifts Compare to any available benchmarks of overall US growth to identify where foreign work over- or under-indexes	Medium
Compare means & variance in wage rates across occupational groups	Identify groups that have statistically higher wage rates	Calculate means and standard deviations grouped by SOC Name, rank in descending order by mean Using z-test method, compare pairs to identify statistically higher-paying occupations	Low