A Chance to Work

Understanding the composition of foreign workers
pursuing specialty occupations on the United States H1-B visa

Team GUNDAM

Alexander Buddenbaum, Tianyu Li, Qinrui Li, Chuanqi Liu, Tianshu Tao
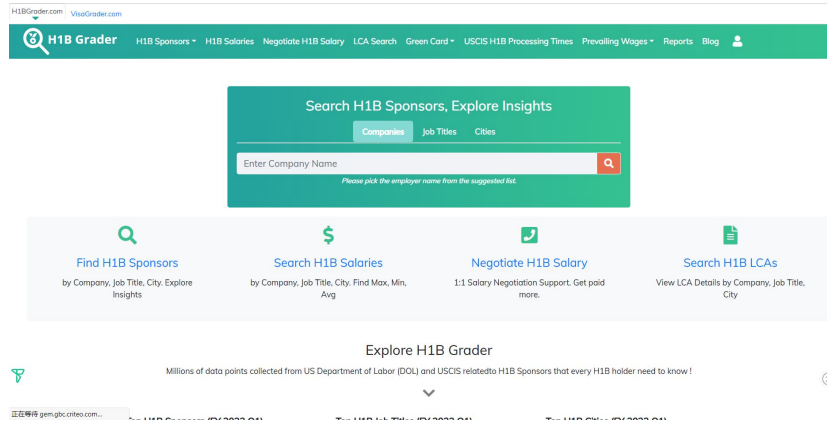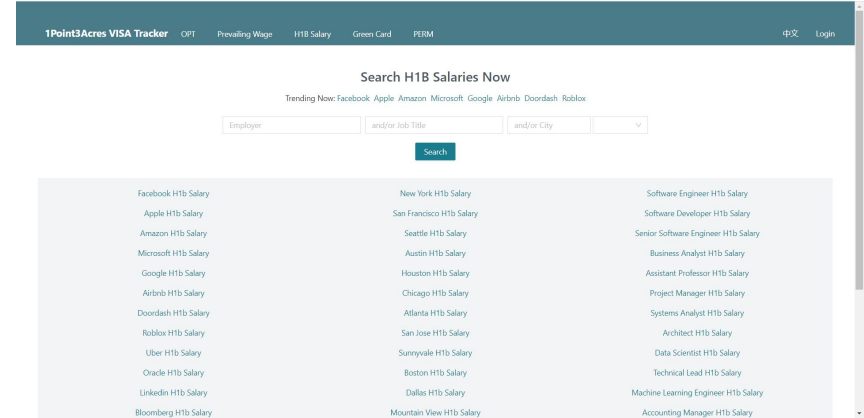
What are we trying to do?

Identify trends:
- job title
- salary band
- country of origin
- geographic location
- sponsoring employer

in **US immigrant visa applications** through analyzing data over the past 5 years
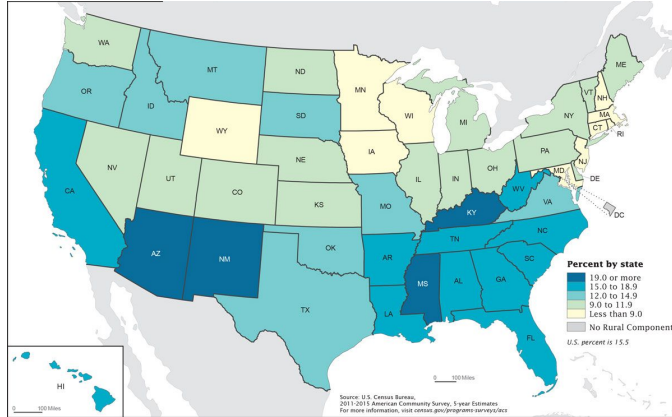
Current Practice and Limits

H1-B Grader

1 Point 3 Acres

- Online databases provide textual tables through searching keywords
- But lack sufficiently thorough and meaningfulinteractive visualization

New approach to make it successful!
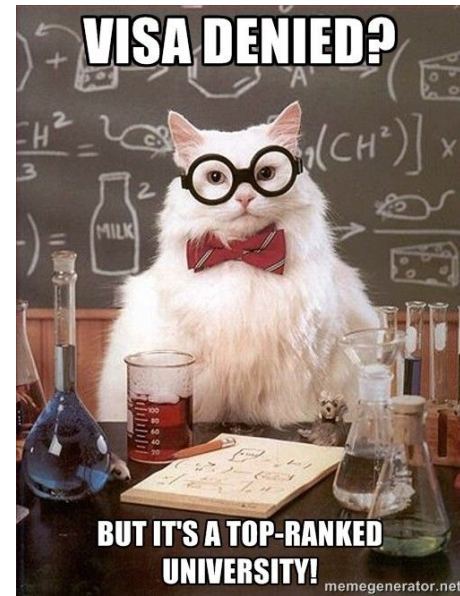

visualization

immersive interaction

- Facilitate immersive exploration of data by the user
- By interacting with the data, the user will gain more meaningful insights to apply in their own career planning

Who cares?

H1-B visa applicants:
- international students
- prospective employees of organizations with a physical presence in the United States
- etc.

to make better-informed decisions in their career planning.

Expected Impact

- Increase awareness among potential STEM graduate applicants from Sino-US joint university programs
- Fewer unqualified applicantions→reducing DOL/USCIS processing backlog
- Enabling applicants to better prepare for work in their target companies→Increase the overall quality of applications

How to measure them?

Survey - before and after showing GTSI students the application to evaluate their prior knowledge level and the efficacy of our application.

Our Tech Stack

Data Acquisition	Data Cleaning	Database	Visualization	Frameworks	Cloud

.csv and .xls foramt

OpenRefine, numpy, pandas

MySQL or SQLite

d3.js, vue.js/react.js

front end - back end seperation framework

AWS

Risks, payoffs, and costs

Risks - No risks except time consuming.

Payoffs - Make people raise awareness among potential applicants regarding past H1-B application competition.

Costs - No costs, all stuffs use in this project are free and open-source.

Timeline and plans

Expected working duration

- We expect approximately eight weeks for our five-member team to complete this project, totaling roughly 300 man hours.

Important time point

- <u>By April 1, 2022:</u> Have an initial, working version of choropleth showing applications by employer, their geographic location, and job title.
- <u>By April 21, 2022:</u> Release a refined version of choropleth allowing the user to filter based on user-input criteria, such as employer, location, job title, salary band, and country of origin. Include bar graph distribution of applications submitted and accepted based on the above attributes.

Thank You