The Future of Work: A data-driven approach to understanding the job market

TARUSHI GUPTA
HIBA HASSAN

PROJECT MOTIVATION

This **data story** delves into understanding how AI is not just a buzzword but a transformative force shaping the global job market and entrepreneurial space

As graduate students, navigating the current job market and questioning ideal roles and our motivations, this becomes a pertinent study

The Data

Main Datasets Used

Artificial Intelligence Job Openings*	Identifying AI-related job opportunities globally and in the USA.
The Top 1000 Companies*	Analyzing companies and industries that offer AI-related job openings.
	Investigating correlations between company growth, revenue, and AI job opportunities.
Career Path Selection Challenges*	Emphasizing the significance of targeted skillsets in career decisions.
	Exploring factors that influence career path selection.

Themes & Questions

The AI Employment Landscape	**AI Adoption in the USA & Decentralization of Tech Hubs**	• How has the AI job market evolved over the years? • Where are the AI Technology Hubs? • Within the USA, which states are emerging as new hubs for AI job opportunities?
The Innovation Landscape	**Metrics for growth Influence of Investors & Accelerator Programs**	• Is there any correlation between the growth of a company vs. the number of employees and its growth vs. estimated revenues? • How many of these AI companies reached a billion-dollar valuation? And who are these? • Which industries do these companies primarily belong to?
Navigating your Career Path	**Personal Motivations Behind Career Choices**	• How does one navigate through their career path? • How do knowledge and skills influence career choices?

KEY FINDINGS

Key Findings

AI Adoption in the USA:
USA dominates the expanding global AI job market, with unexpected growth surges in countries like Spain and new AI hubs emerging in states like Virginia and Florida.

Decentralization of Tech Hubs:
Smaller cities are catching up with traditional tech hubs, and startups are achieving billion-dollar valuations within just 5-7 years of their inception.

Analyzing Metrics for Growth:
Startups exhibit varied growth patterns, with no direct correlation between company growth and employee count or revenues, hinting at diverse business and expansion strategies.

Influence of Investors and Accelerator Programs:
Certain investors have a stellar record in nurturing AI startups to billion-dollar valuations, while accelerator programs don't always guarantee heightened market values.

Personal Motivations Behind Career Choices:
Career choices are deeply influenced by personal passions and previously acquired skills, emphasizing the significance of introspection and self-awareness in one's professional journey.

THE JOURNEY

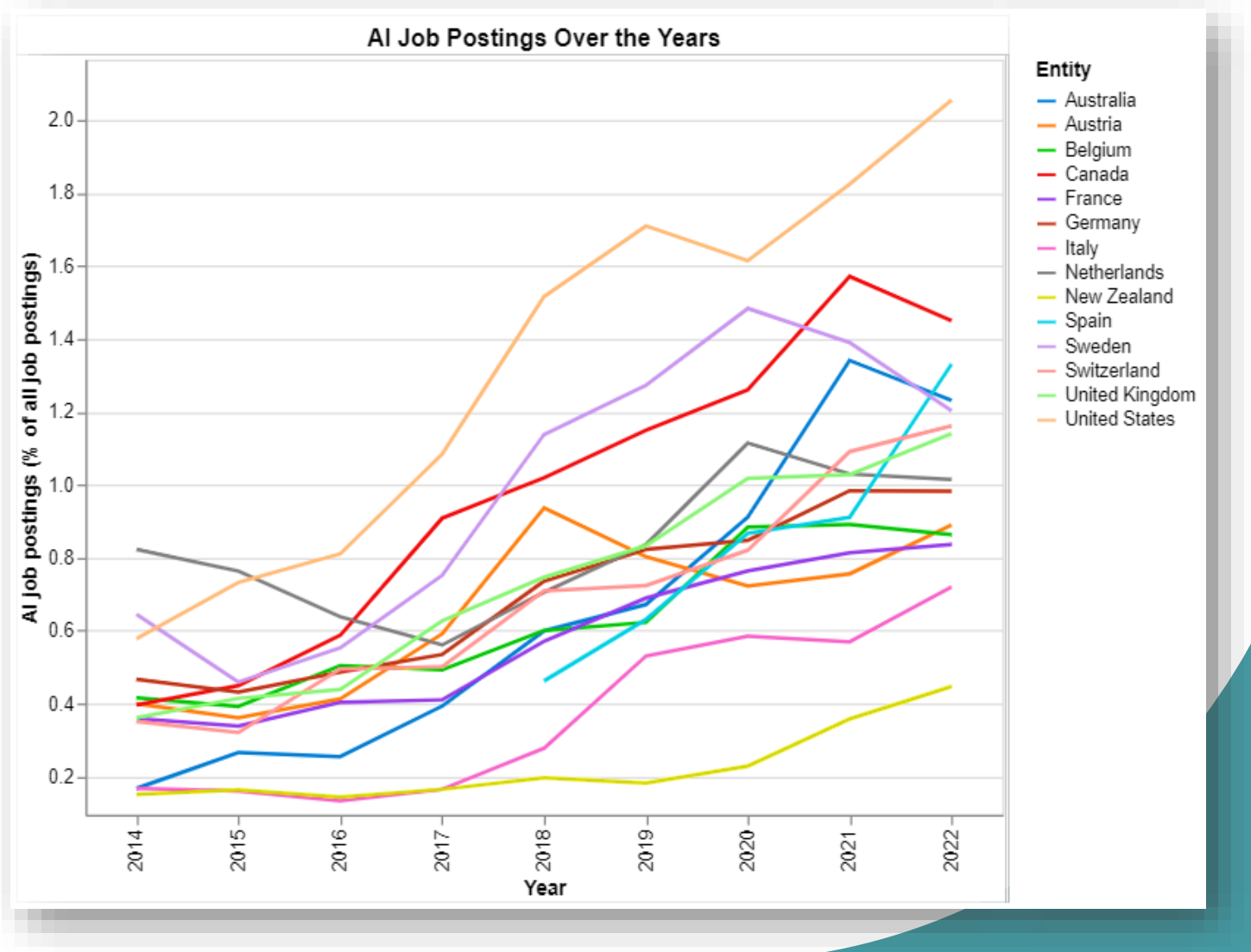
THE AI
EMPLOYMENT
LANDSCAPE

How has the AI job market evolved over the years?

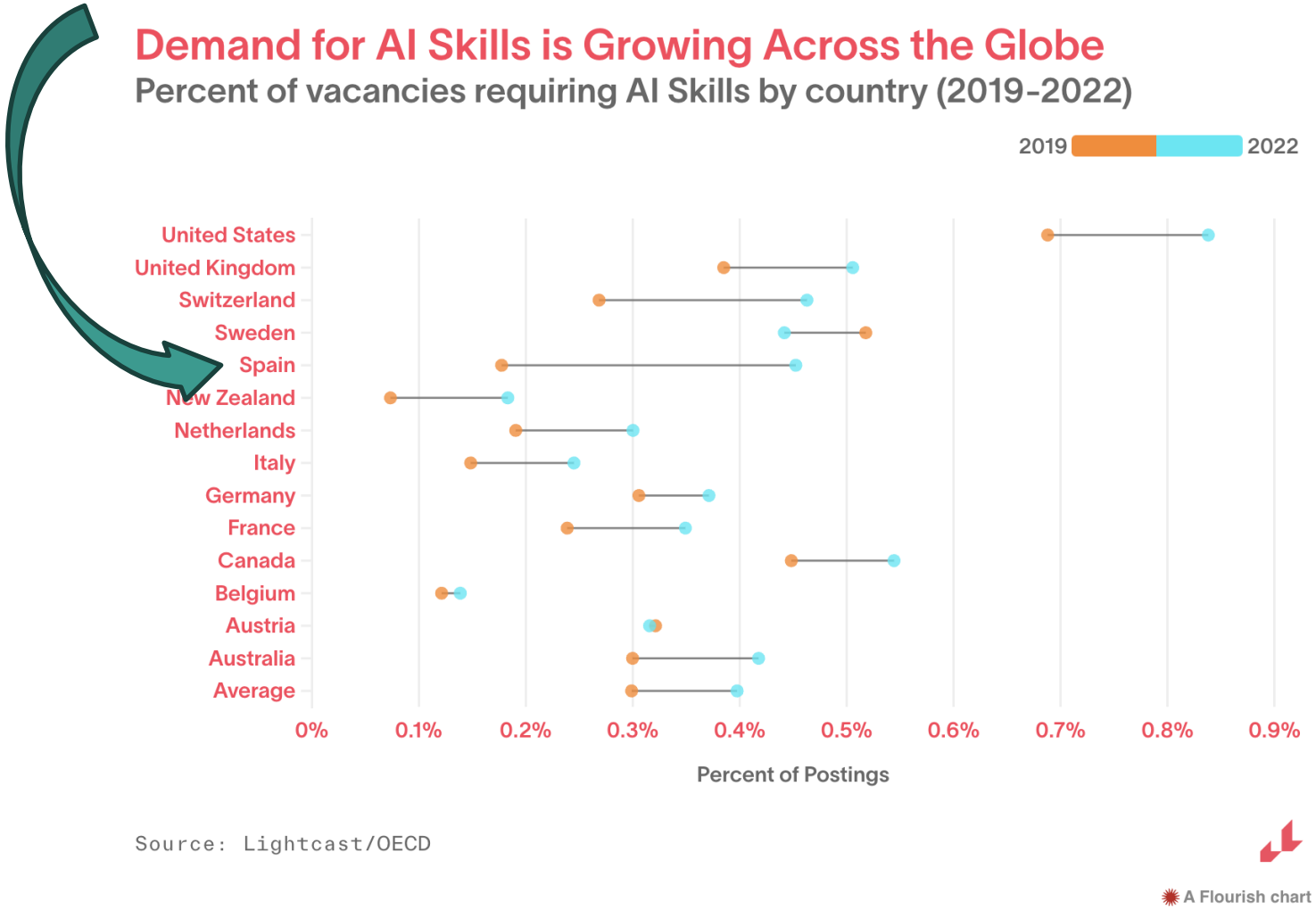
Where are the AI technology hubs?

Since 2014, the number of job openings in the field of AI has experienced a substantial increase in countries worldwide, representing a ***growing trend in the demand for AI-related positions.***

Top Hubs(2022)
USA
Canada
Spain
Australia
Italy



In Spain, Belgium, and Italy more than four in 10 AI postings are in ICT. And manufacturing leads in Germany, Sweden, and Switzerland. This is partly due to the existing local specialization of these economies and partially how far they are in their path of adopting AI. In every country, demand is a combination of new firms focusing on AI (typically in the ICT or Professional Services industries) and existing companies looking to integrate AI into their workflows. Demand for AI in Spain, which saw the most dramatic growth, is mostly in the ICT industry and, with a strong focus on Machine Learning

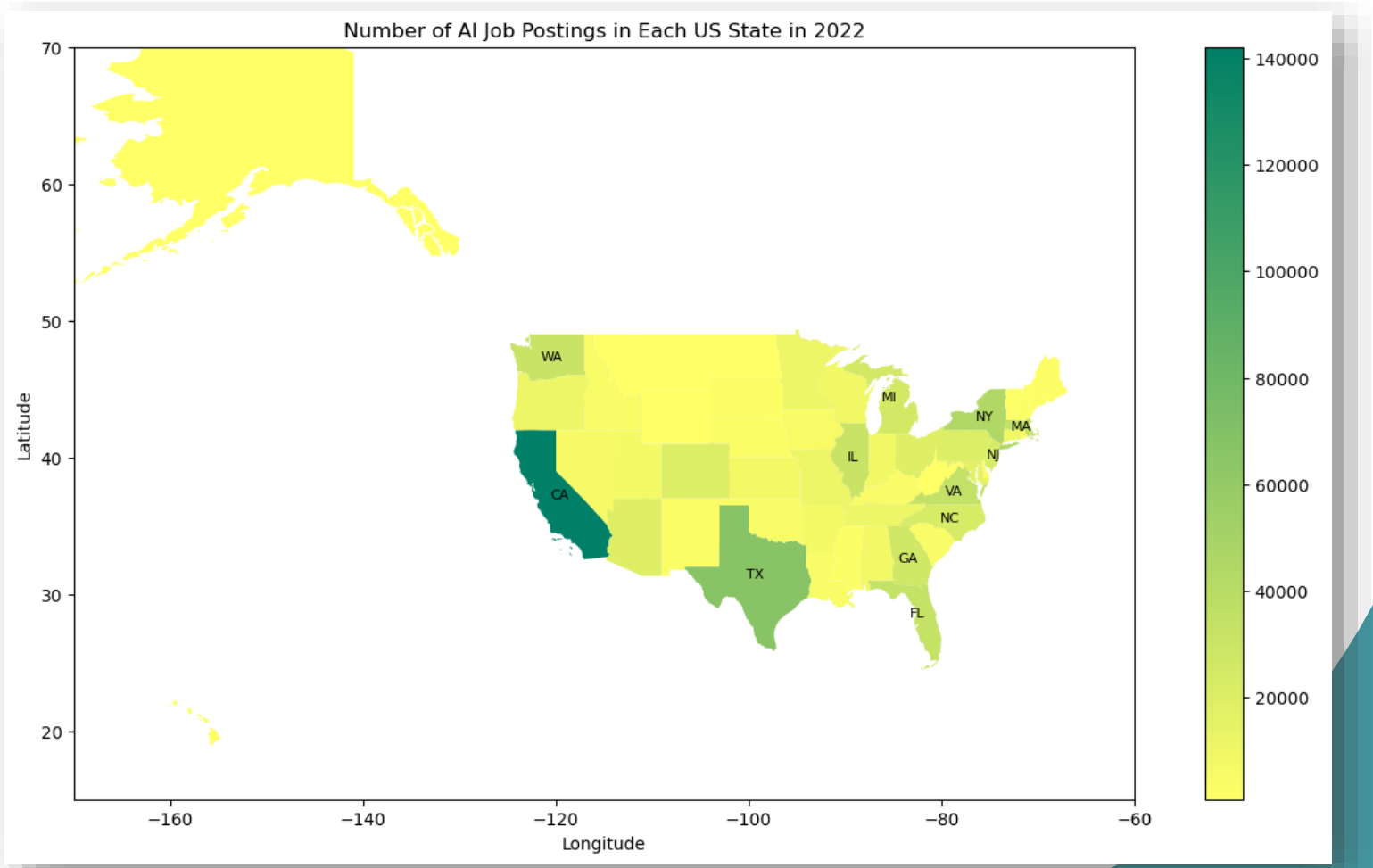


Source: https://lightcast.io/resources/blog/global-ai-skills-jobs

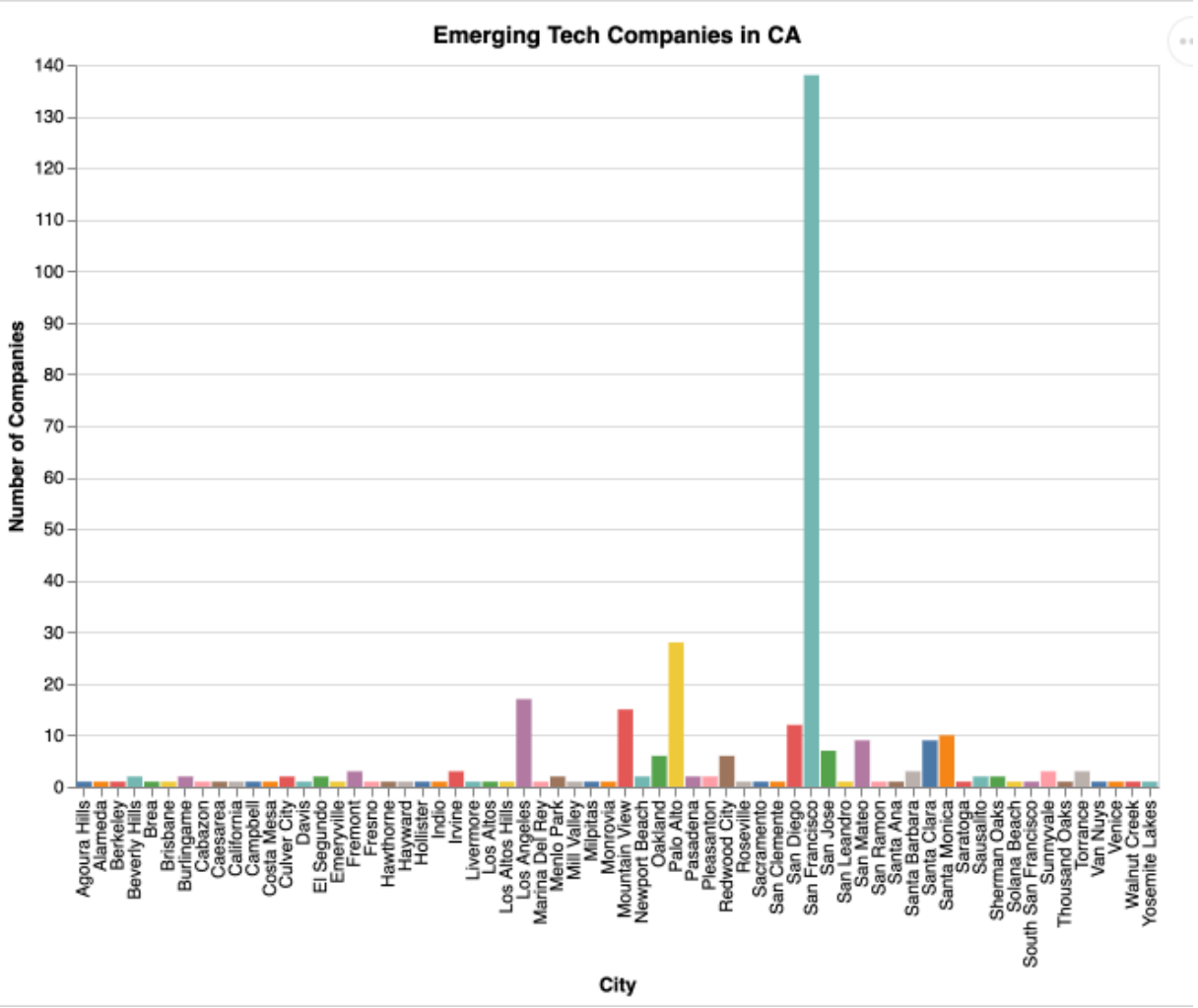
Which states are emerging as new AI hubs?

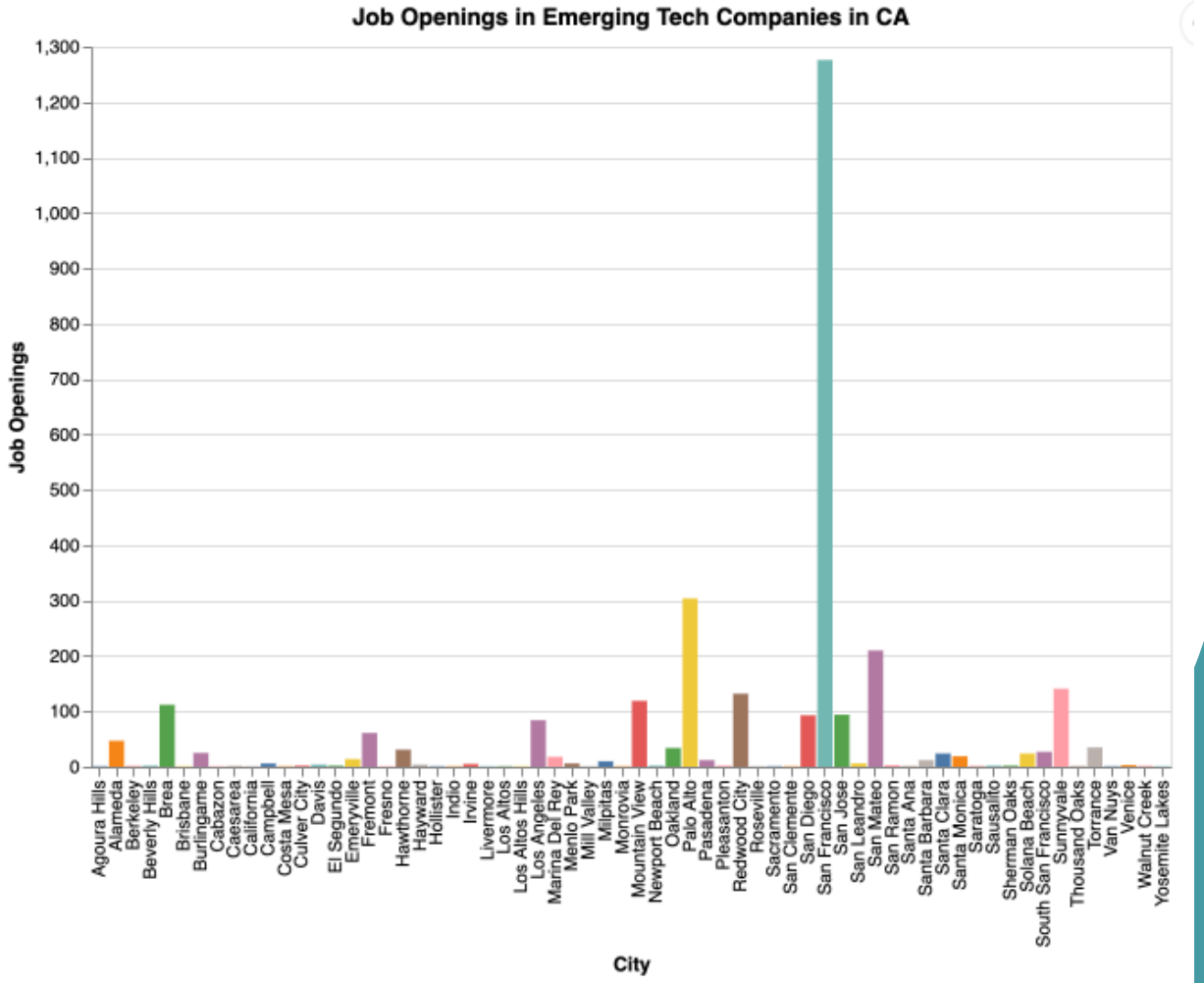
California, Texas, New York, and Massachusetts have been AI hubs

We ***discover*** that states like Virginia, Florida, Illinois, and Washington are experiencing a surge in AI job openings.

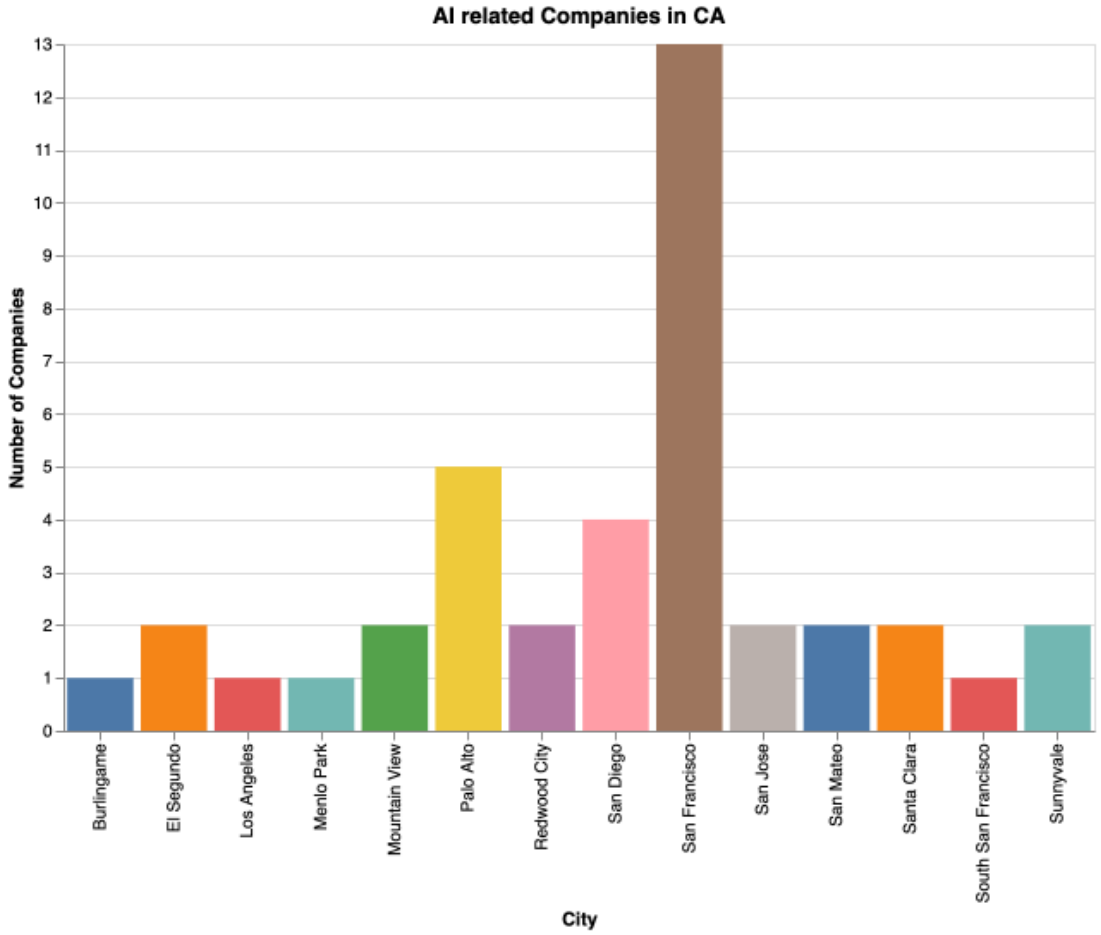


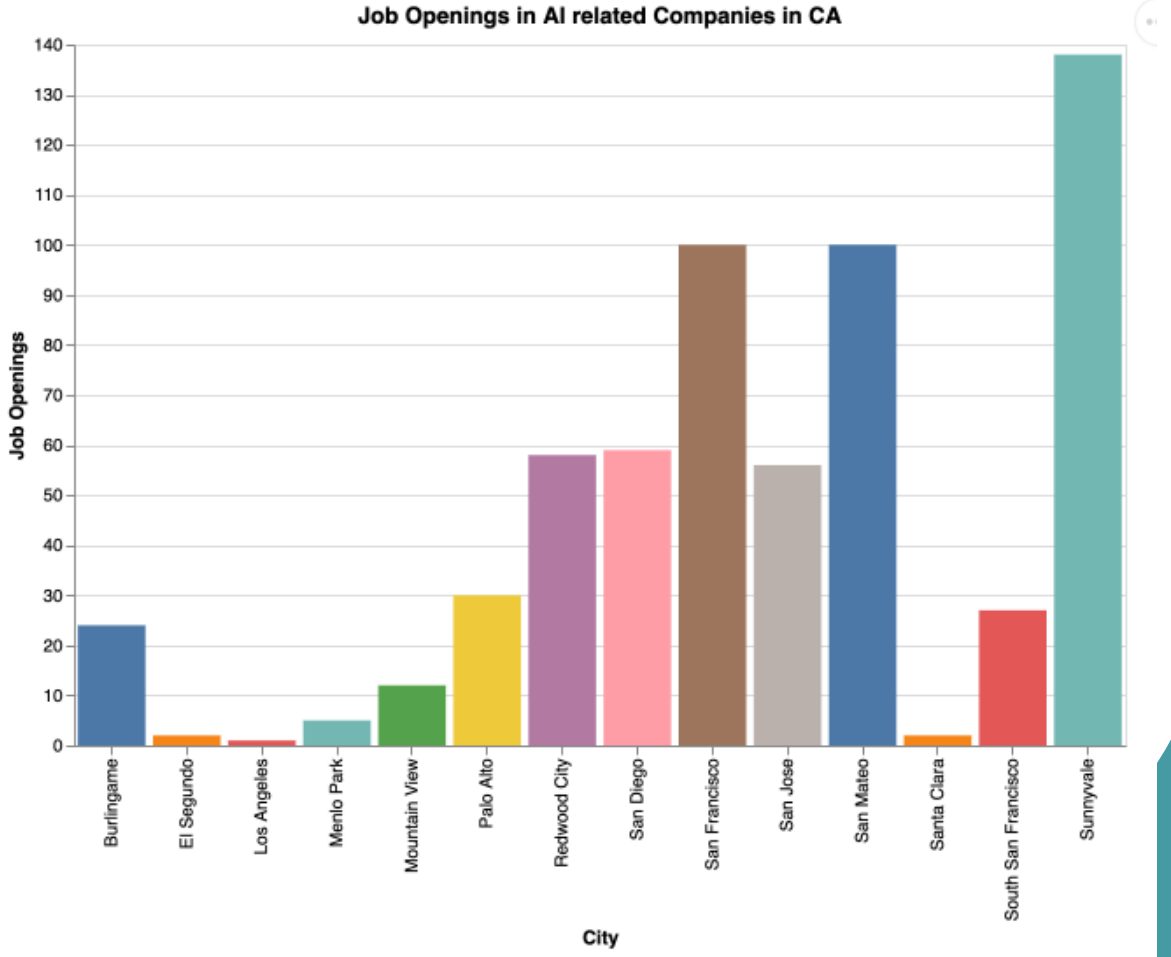
Beyond the Tech Giants





California: ***More AI related*** job roles in Sunnyvale and San Mateo (that have ***fewer AI companies***) vs Mountain View, San Diego or Palo Alto (that have relatively ***more AI companies***)





AI Adoption in the USA & Decentralization of Tech Hubs

Key Findings

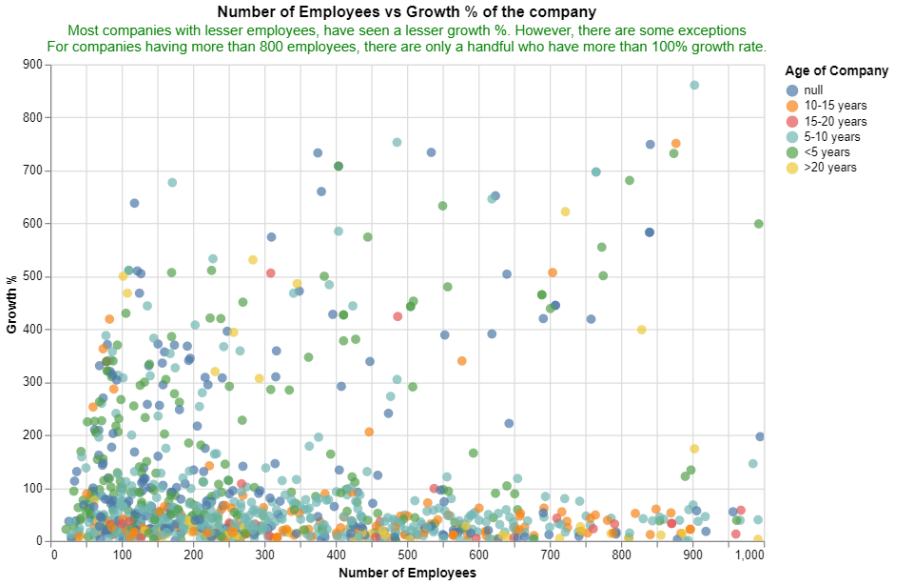
AI job openings have consistently surged worldwide since 2014, reflecting an increasing demand for AI-related roles.

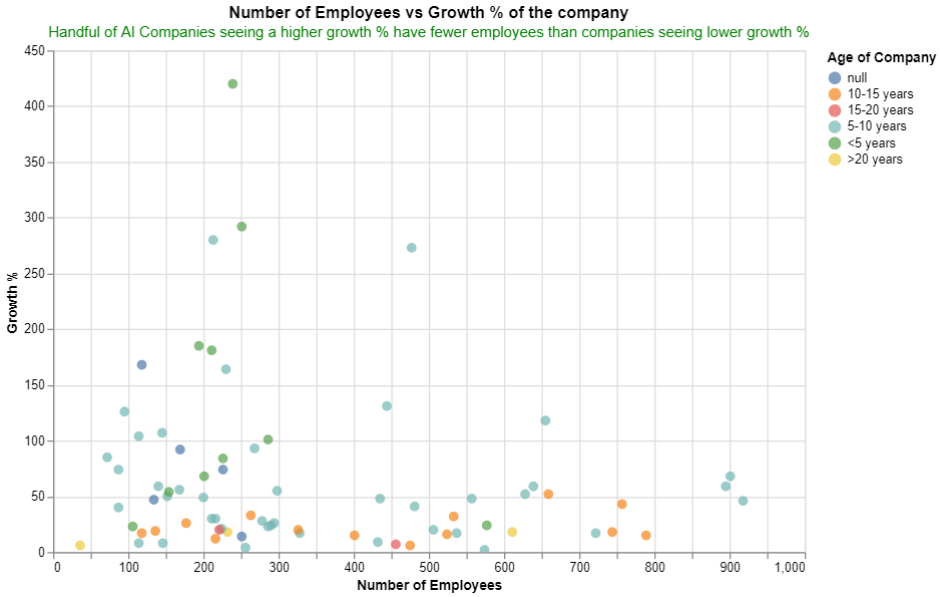
USA dominates the expanding global AI job market, with unexpected growth surges in countries like Spain and new AI hubs emerging in states like Virginia and Florida.

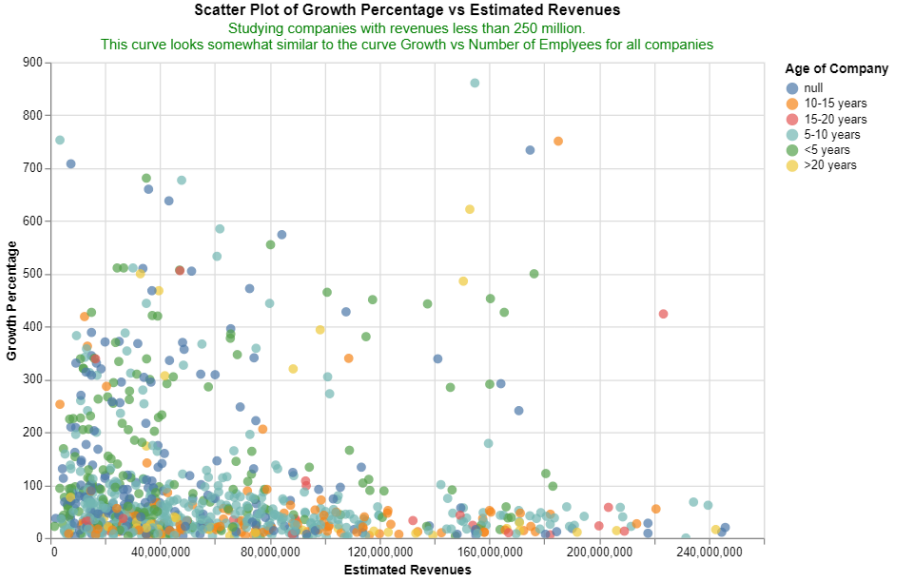
Smaller cities are catching up with traditional tech hubs

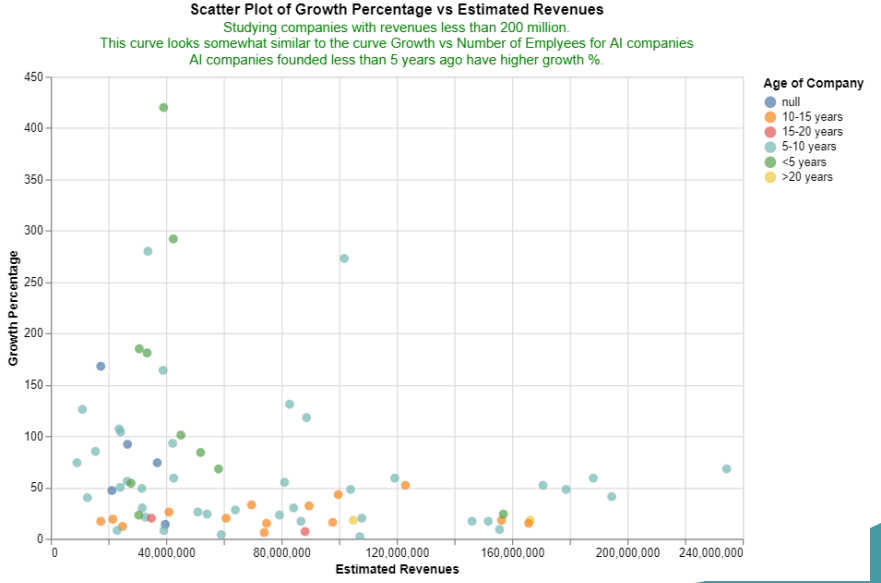
THE INNOVATION LANDSCAPE

Is there any correlation between growth of a company vs the number of employees / growth vs estimated revenues?

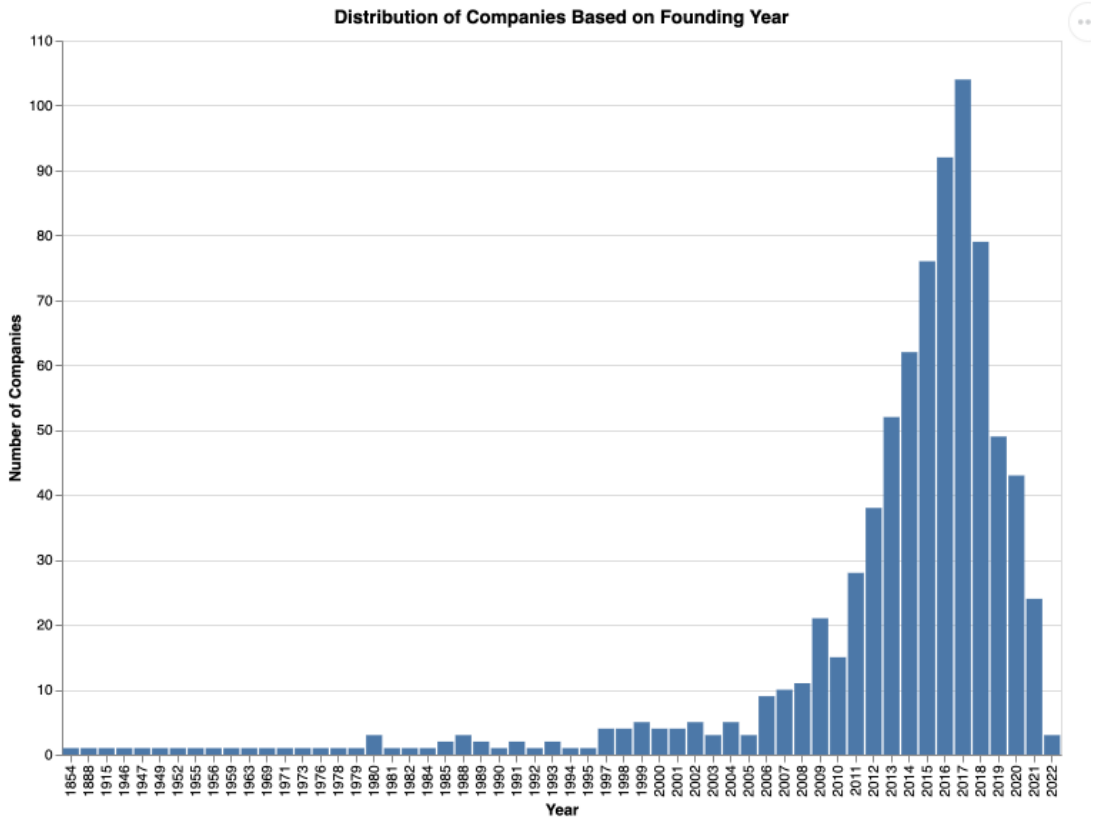


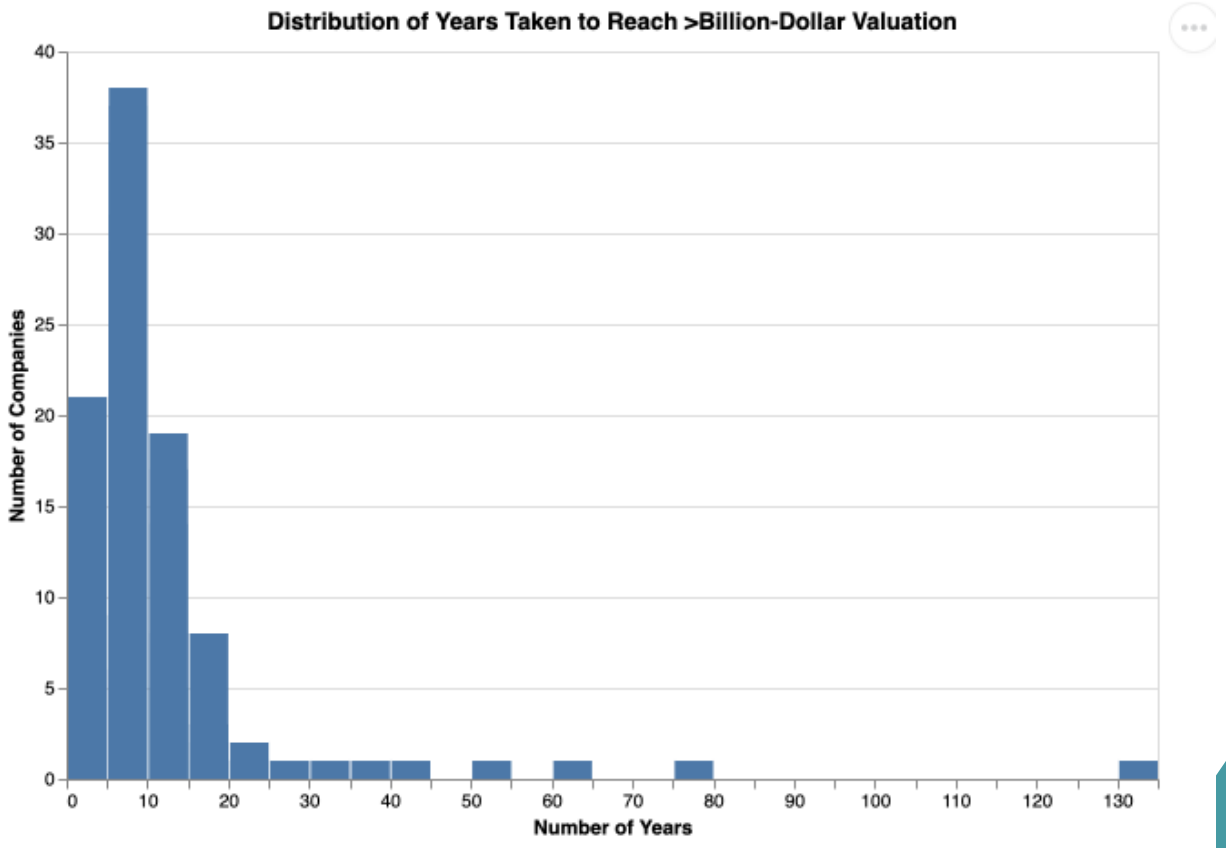




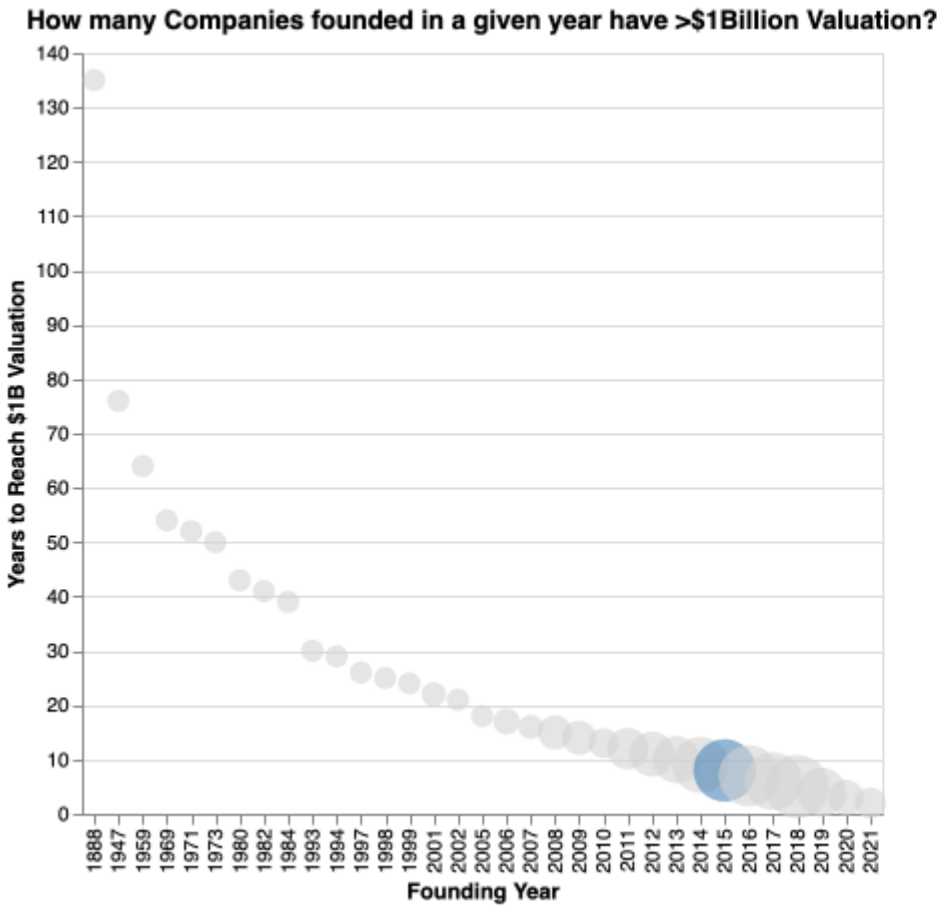


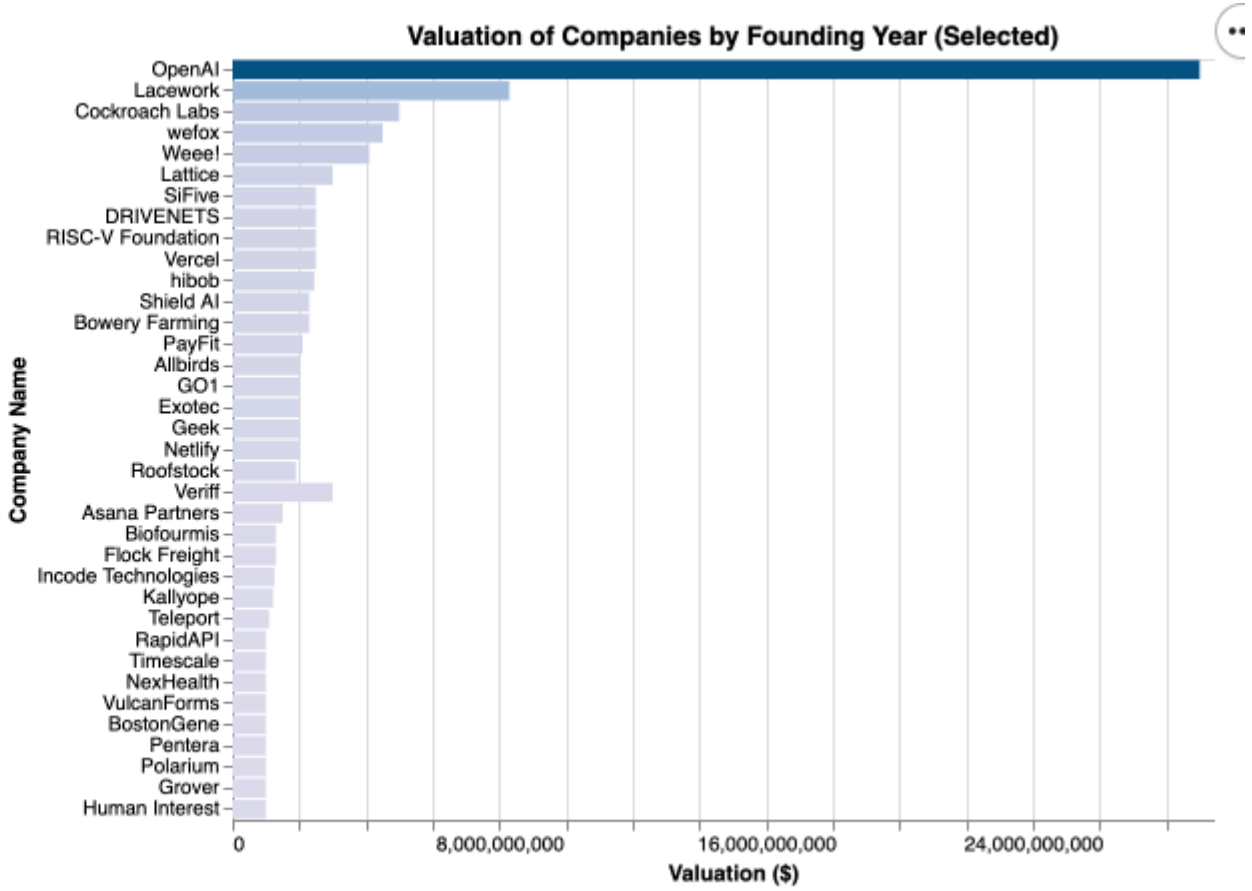
How many AI companies reached a billion-dollar valuation?



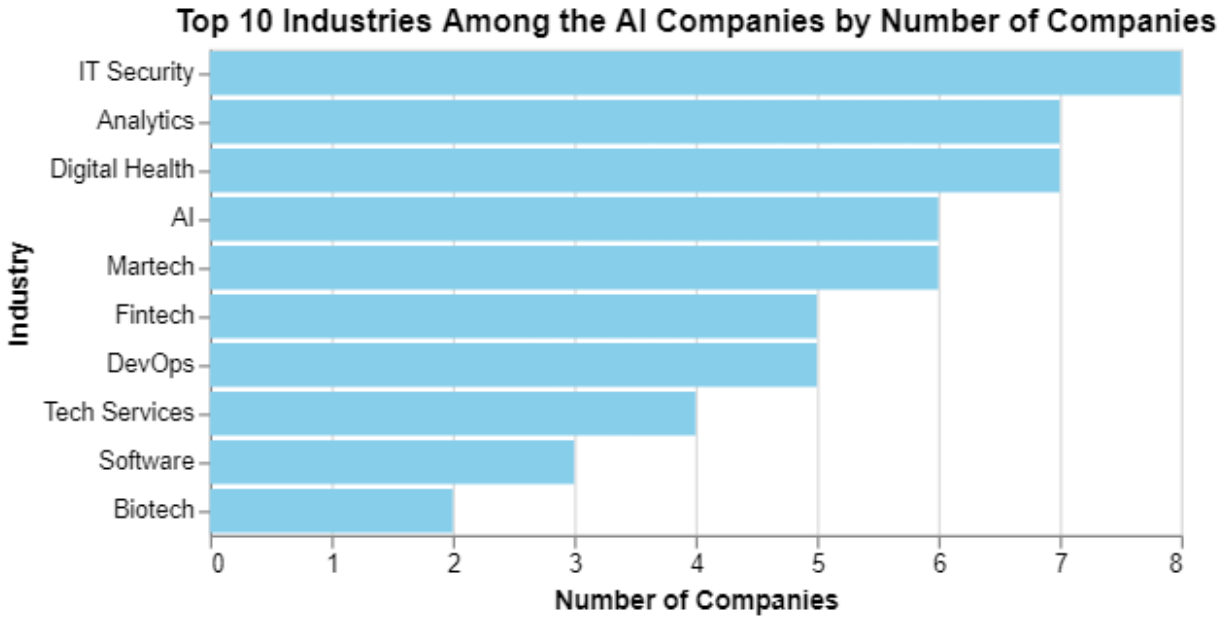


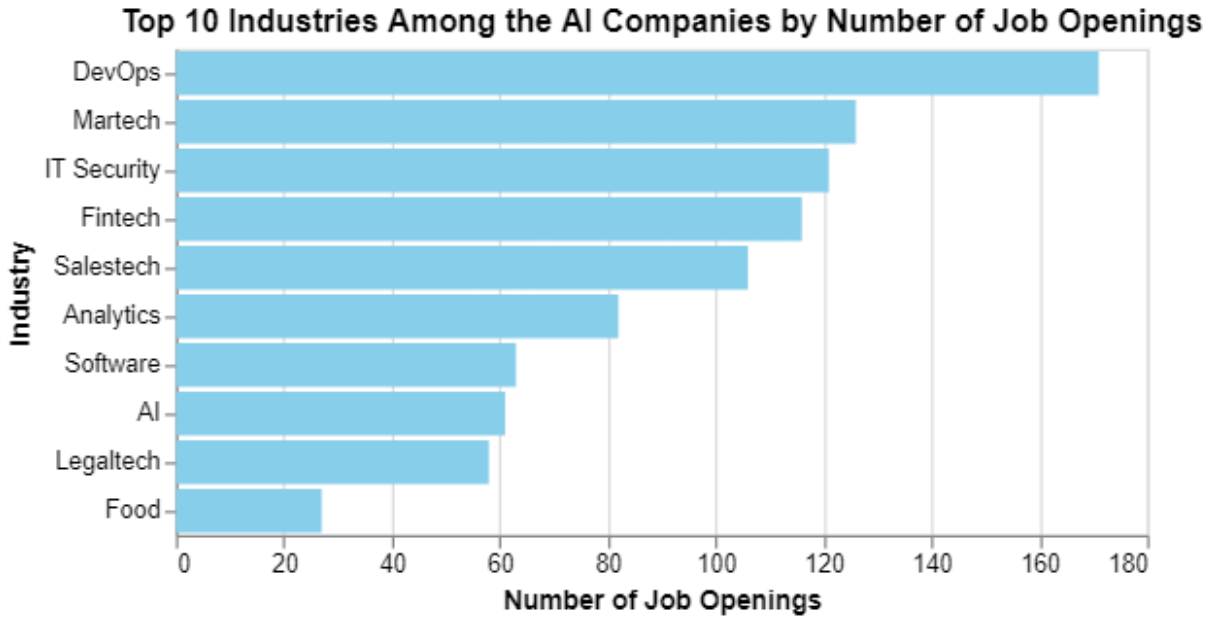
How many AI companies reached a billion-dollar valuation?



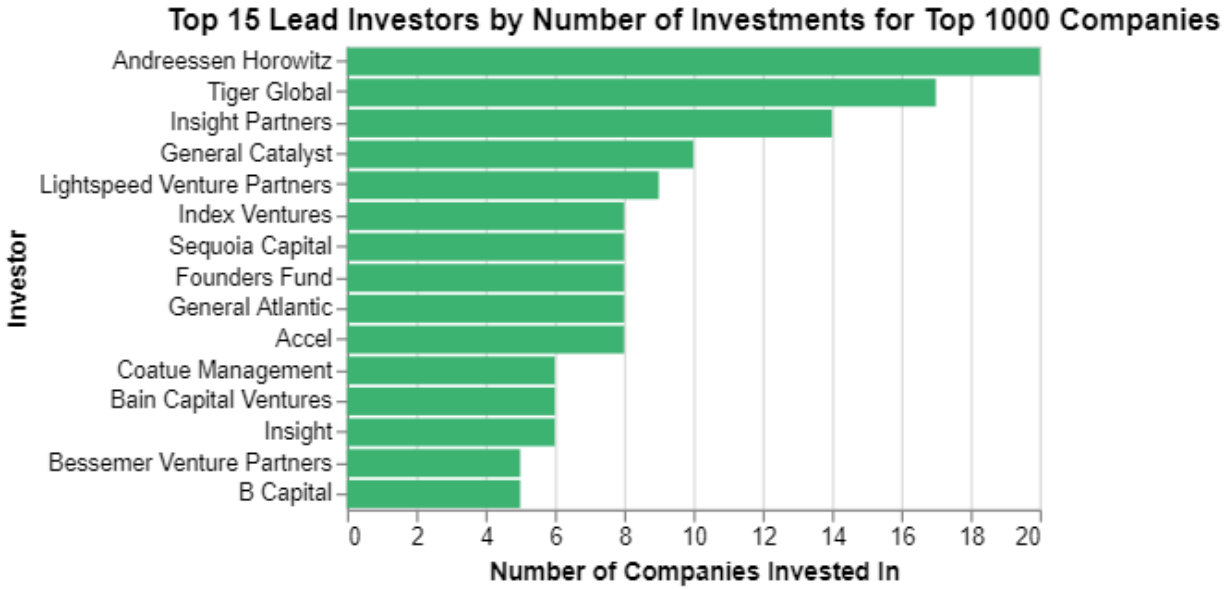


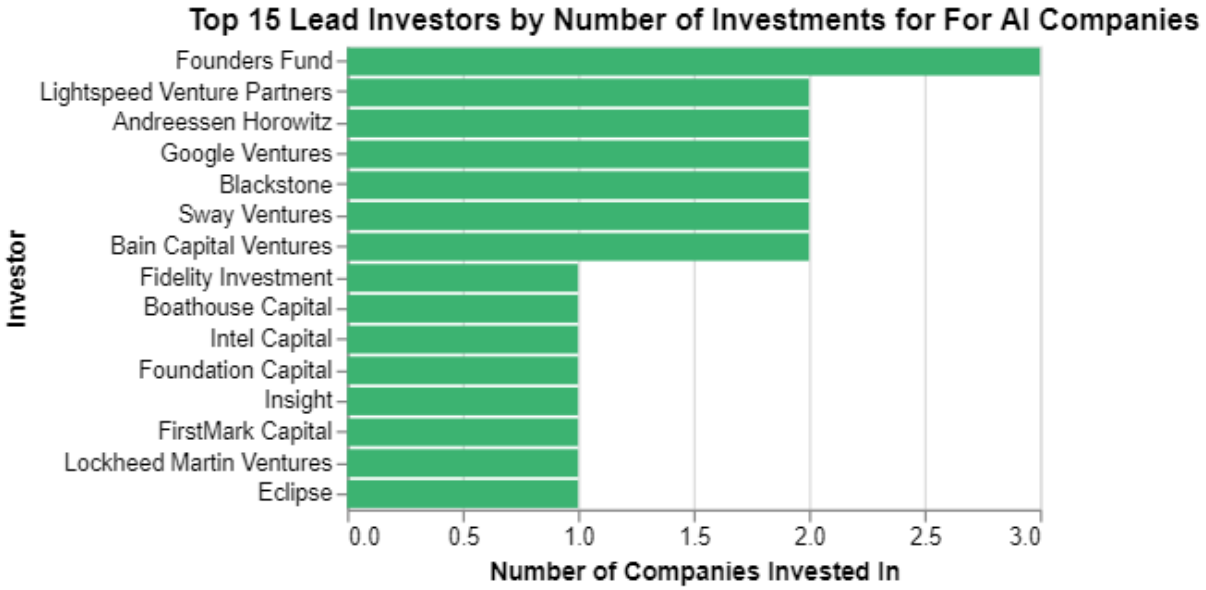
What Industries is the AI space made of?

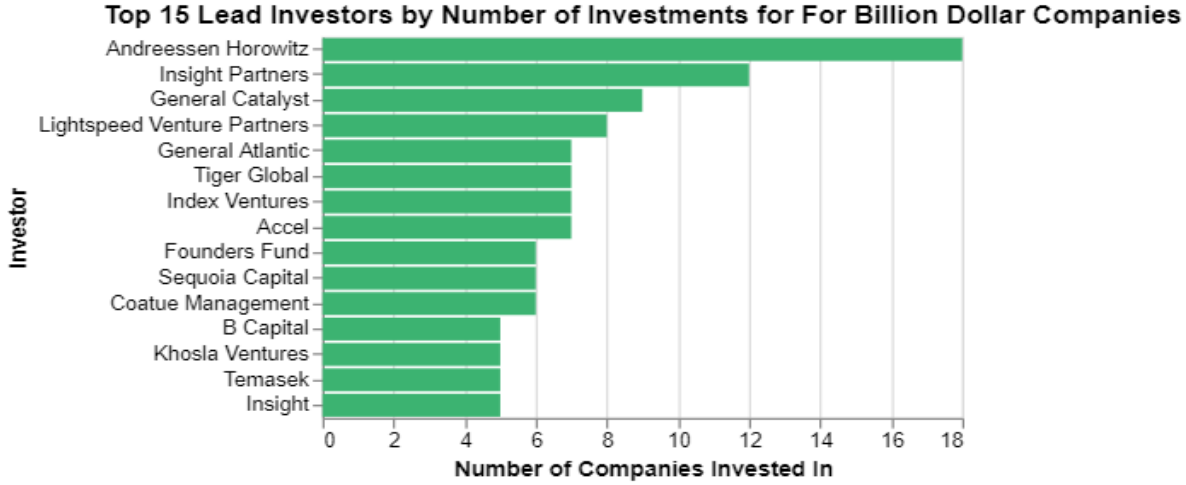


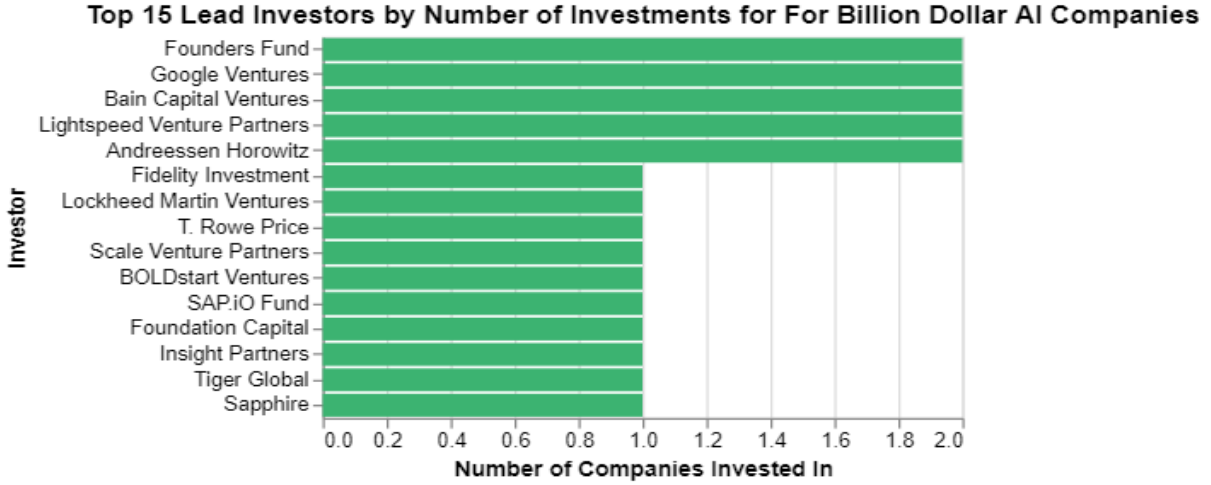


Who are the lead investors in these companies?

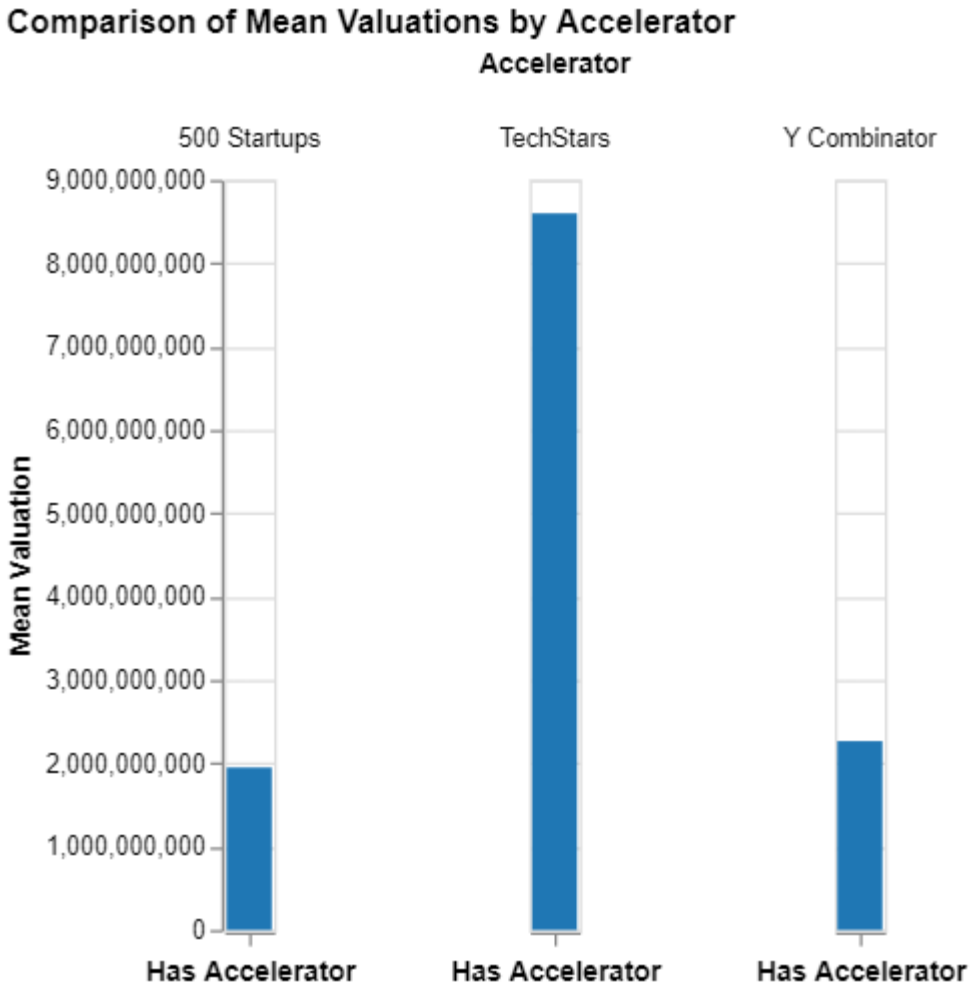








Do accelerator programs make a significant difference in the valuations of AI companies?



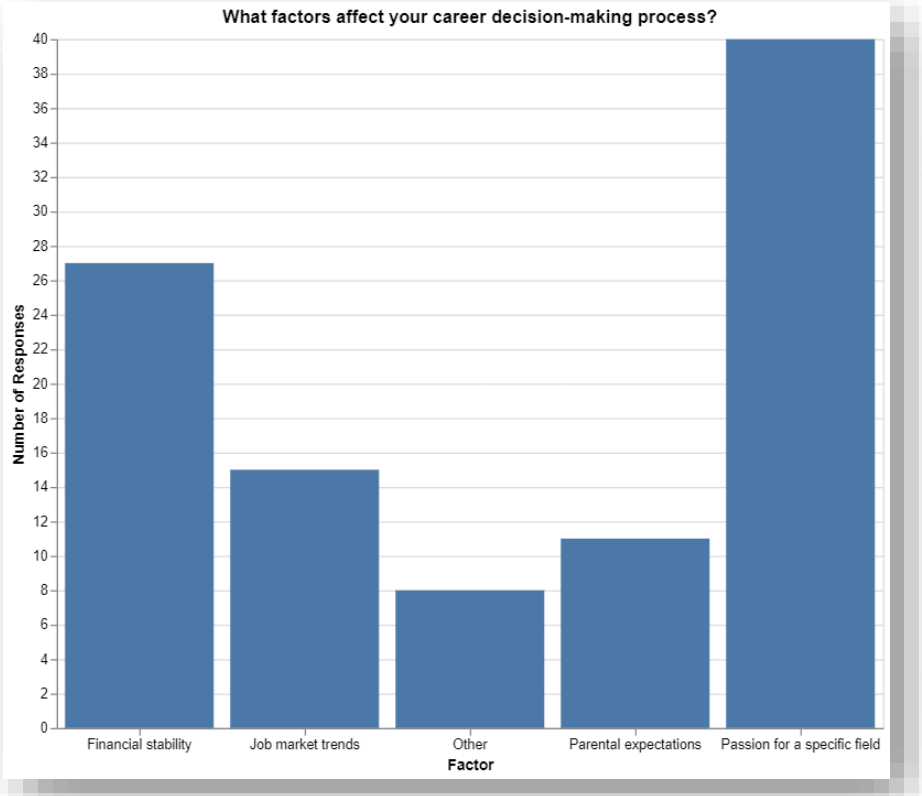
Metrics for Growth
Influence of Investors & Accelerator Programs

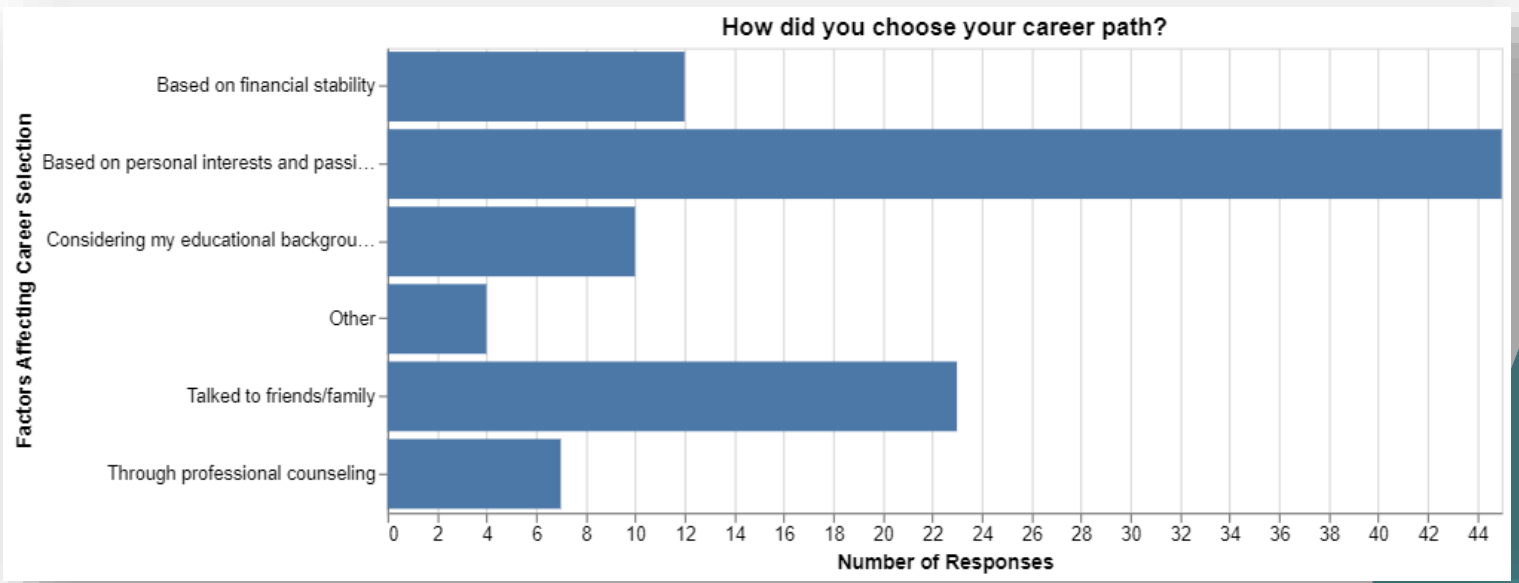
Key Findings	Higher growth/revenues do not necessarily mean higher job openings
	Higher revenues in AI-focused companies don't guarantee more job openings. Additionally, for startups, higher revenues may correlate with reduced growth, raising questions about the factors driving their valuations.
	Certain investors have a stellar record in nurturing AI startups to billion-dollar valuations, while accelerator programs don't always guarantee heightened market values..

NAVIGATING YOUR
CAREER PATH

How to navigate career choices?

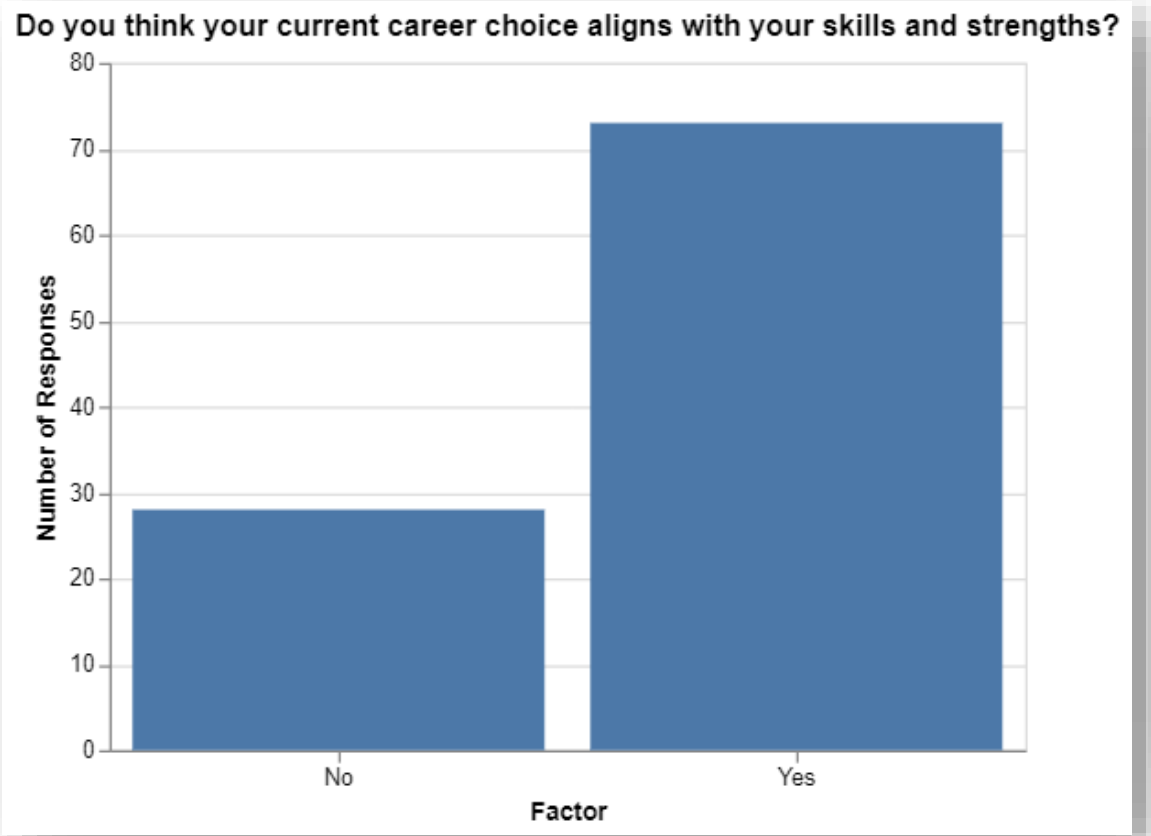
Beyond financial incentives and market trends, it was their genuine passion and interest in their field of work that held the most value while deciding their career path.

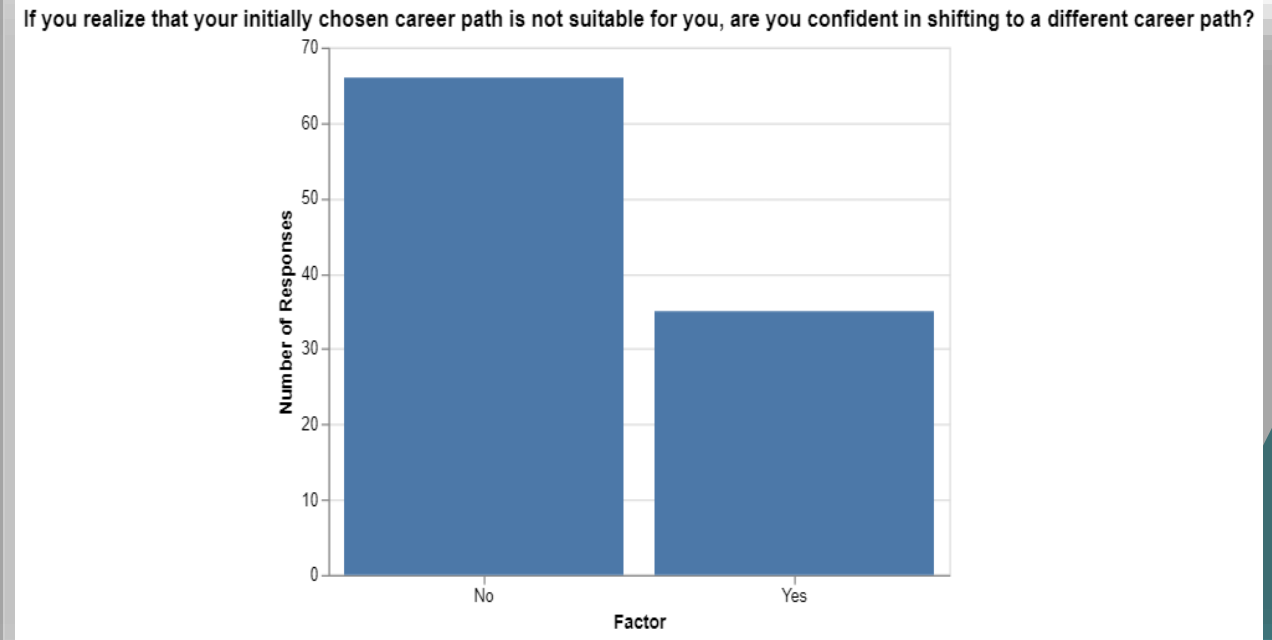




How do knowledge and skills influence career choices?

Career choices are primarily influenced by the skills individuals have already acquired, with less emphasis on skills not yet attained. Individuals are often reluctant to pursue career paths that require skills learned on the job.





How to navigate career choices?

Key Findings	Career choices are dictated by personal interests and passions, with secondary emphasis on financial stability and market trends.
	Acquiring career-specific skill sets is key in defining one's career journey which emphasizing the significance of introspection in the new-age job seeker.

SO, WHAT SHOULD YOU DO?

Some Questions to ask yourself.

Self Reflection	What are my true passions?
	What specific skill sets are essential for pursuing a career in my chosen field?
	Is there a growing demand for professionals in my field of interest?
	Should I target startups or established corporations based on my preferences?
	Which companies align with my career goals? Do they offer relevant job opportunities and exhibit growth?
	Do these companies have investments or partnerships with billion-dollar firms?

THANKYOU

TARUSHI GUPTA
HIBA HASSAN