



SP2023 CSE 5544

INTRODUCTION TO DATA VISUALIZATION





FINAL PROJECT PRESENTATION

Trio Visualizers

Group : 10

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chen.8028

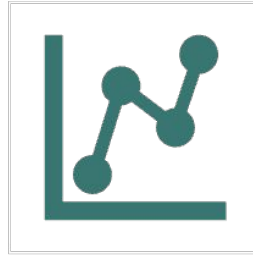




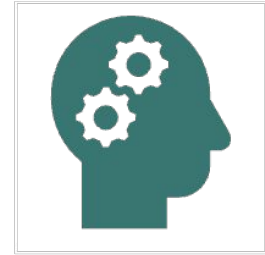
PREFACE



Understand the presented data



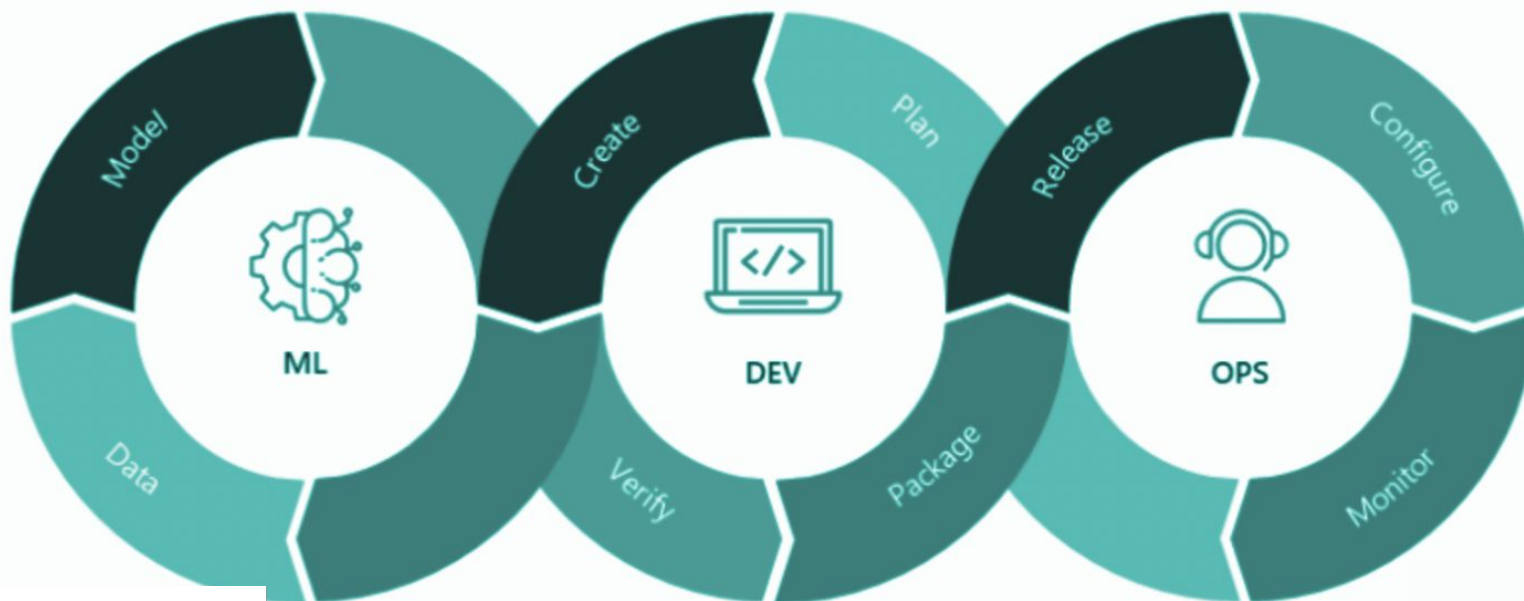
Visualize the dataset to cater to deeper perception of the data and its use cases across industries

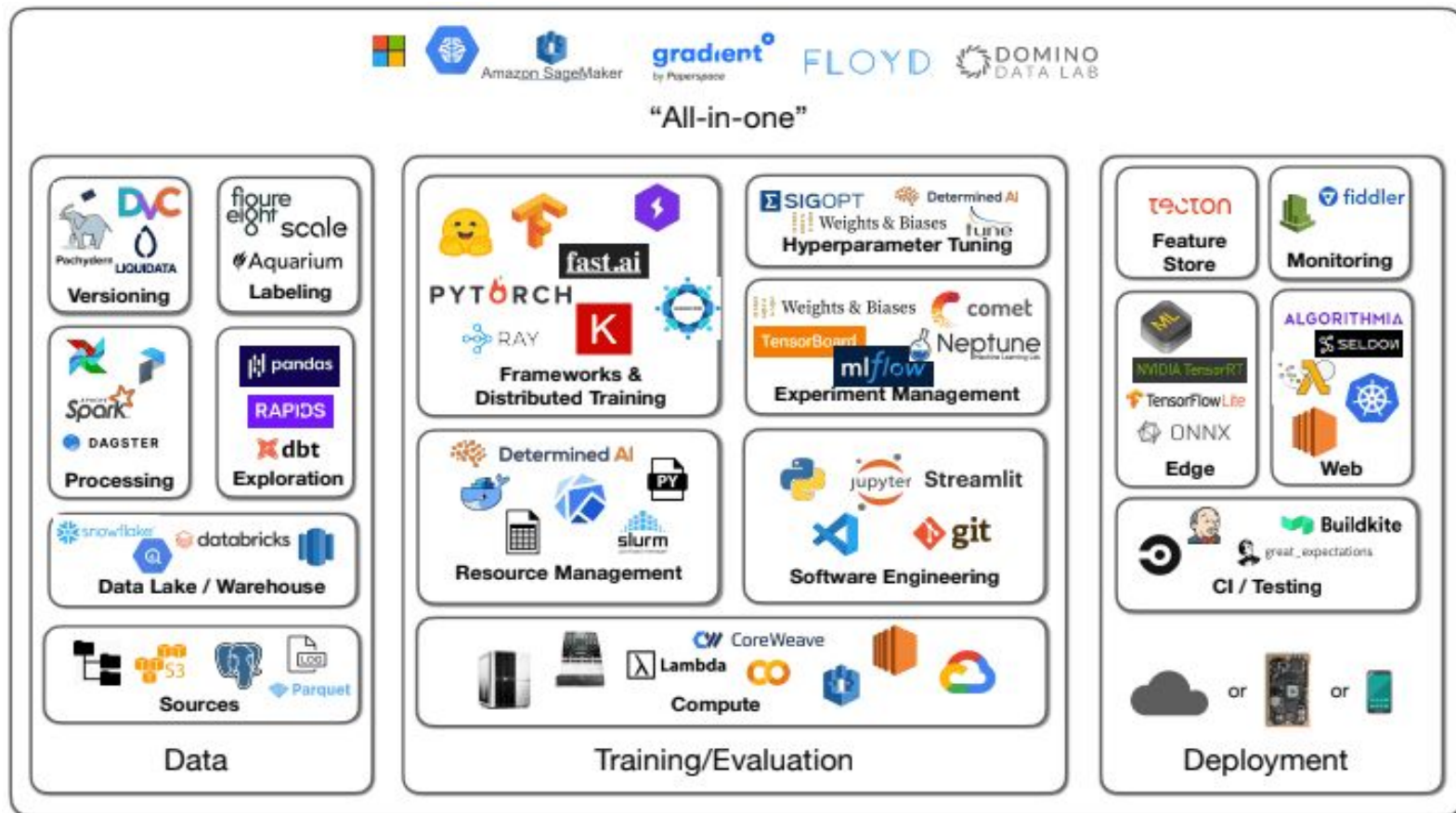


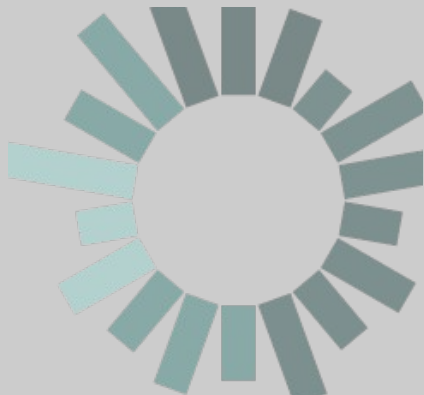
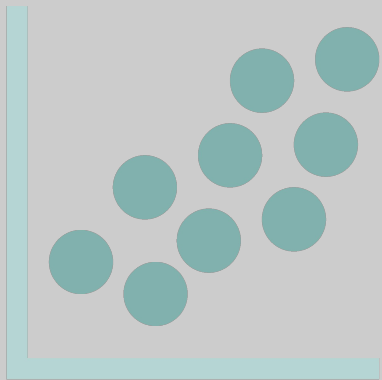
Understand further from the visualizations and evaluate the future scope of the project



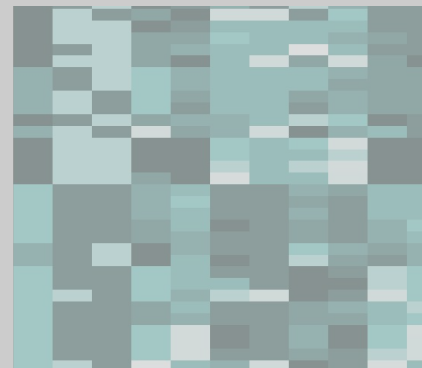
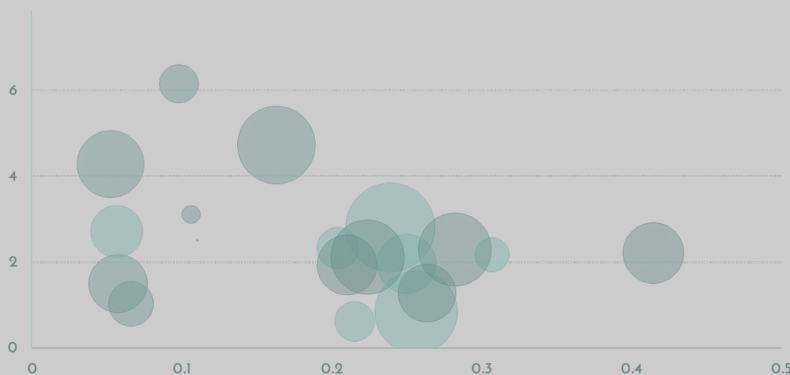
DATASET DEEPPDIVE







A TOUR OF OUR VISUALIZATIONS



DATA TO ACTION

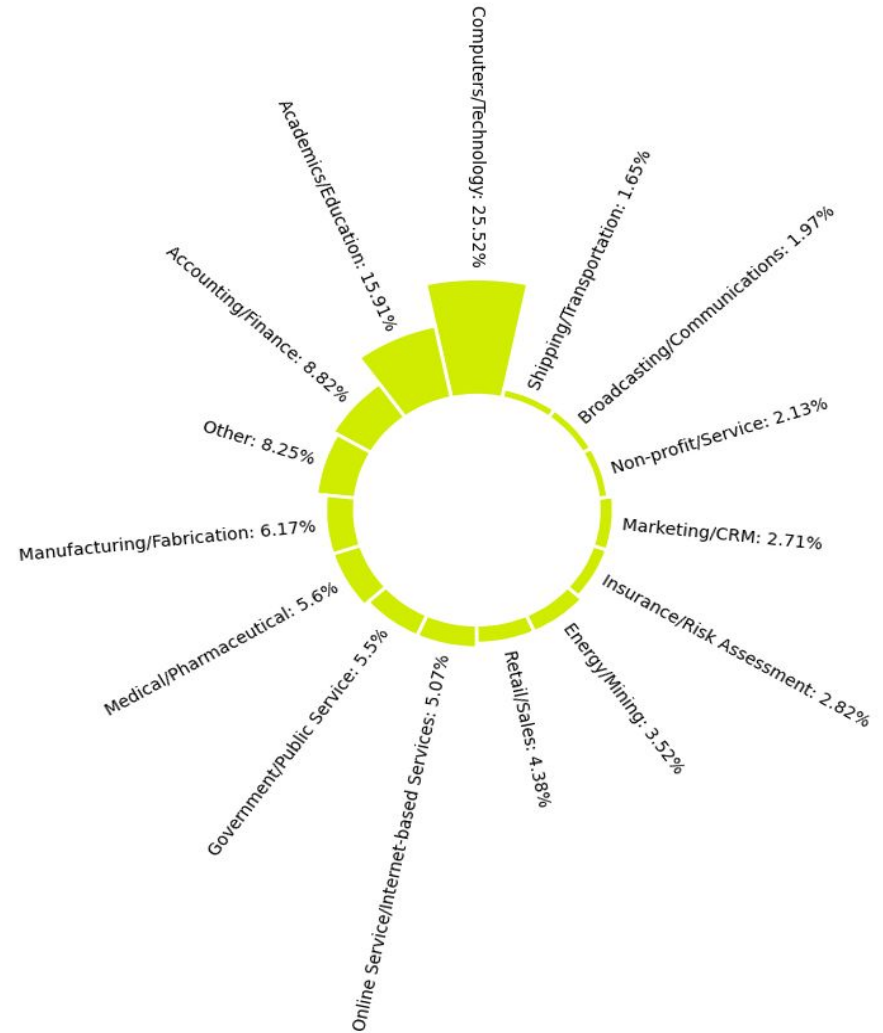


CIRCULAR BAR CHART

AI adoption across industries and sectors at enterprise level

INSIGHTS

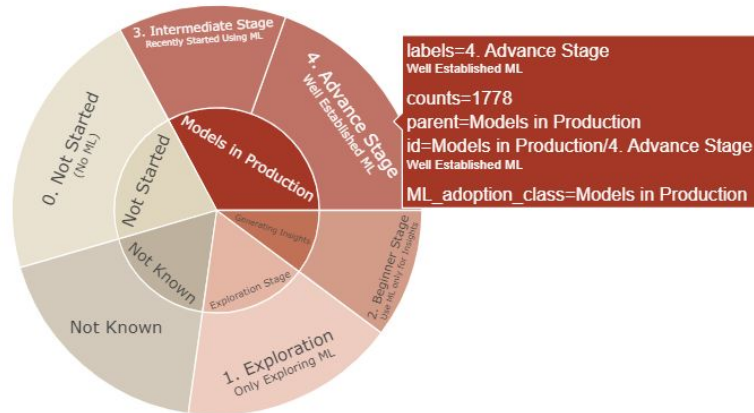
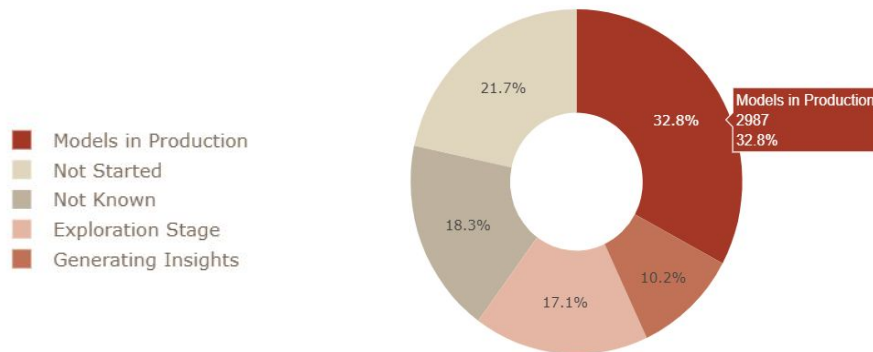
- Percentage of AI integration in different industries
- To analyse where AI is needed in today's world
- The kind of applications that can be built for better reach



DATA TO ACTION

DONUT CHART

Integration of ML across industries in 2022



INSIGHTS

- How ML and AI are integrated at enterprise level across industries and the varying degrees of adoption of these technologies.

DATA TO ACTION



SCATTER PLOT

ML adoption across sectors

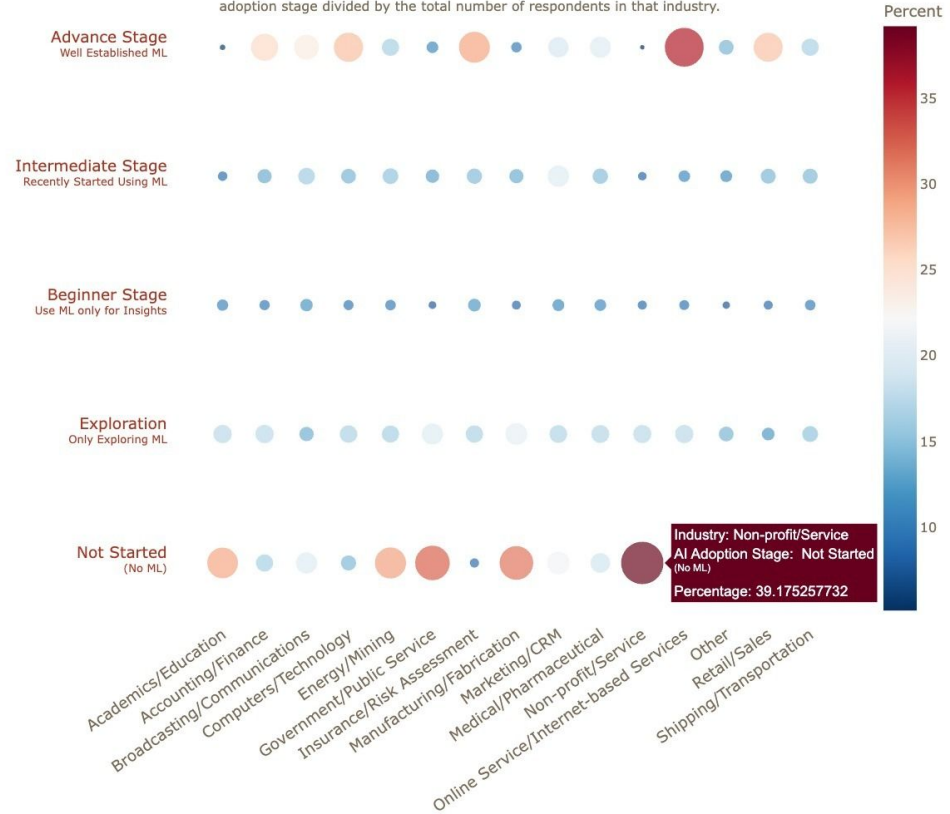
INSIGHTS

- Understand which sector stands on top in AI adoption
- To analyse that private sector scores better than public sector in tech modernization
- Internet service companies > Insurance companies > non-profit organizations > government organizations

Machine Learning Adoption across Industries

Responses to Industry (Q24) and Machine Learning Adoption State (Q27) questions

The size and color of the circles on the plot represent the percentage of respondents in each industry who chose a specific machine learning adoption stage. This percentage is calculated as the number of respondents in that industry who chose the specific adoption stage divided by the total number of respondents in that industry.



DATA TO ACTION

SPYDER CHART

Production of ML based on company size.

Productionization of ML models by Company's size

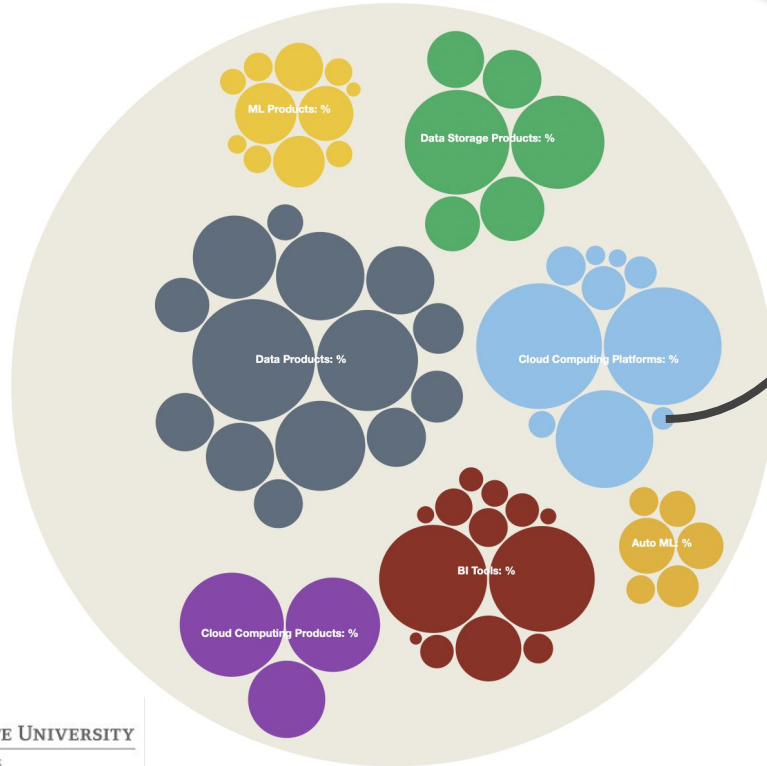


INSIGHTS

- How the size of the company affects the level of production of ML.

DATA TO ACTION

BUBBLE CHART



INSIGHTS

- Understand popular ML tools and products and usage patterns
- Inferences on why these products have frequent utilizations



DATA TO ACTION



TREE MAP

INSIGHTS

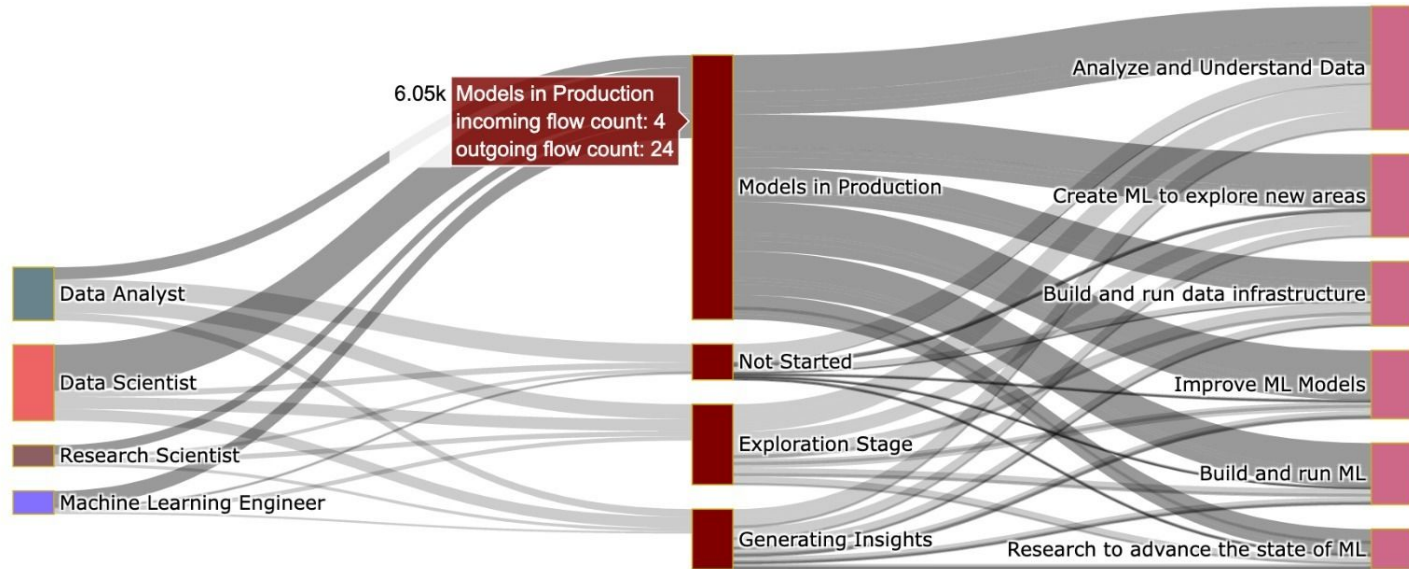
- Comparison of products offered by Amazon, Google, Microsoft, IBM
- Understand which of their services are widely used and why
- Infer how inter-company products binding happens in real time



Popular Tech companies and their services

DATA TO ACTION

SANKEY GRAPH



INSIGHTS

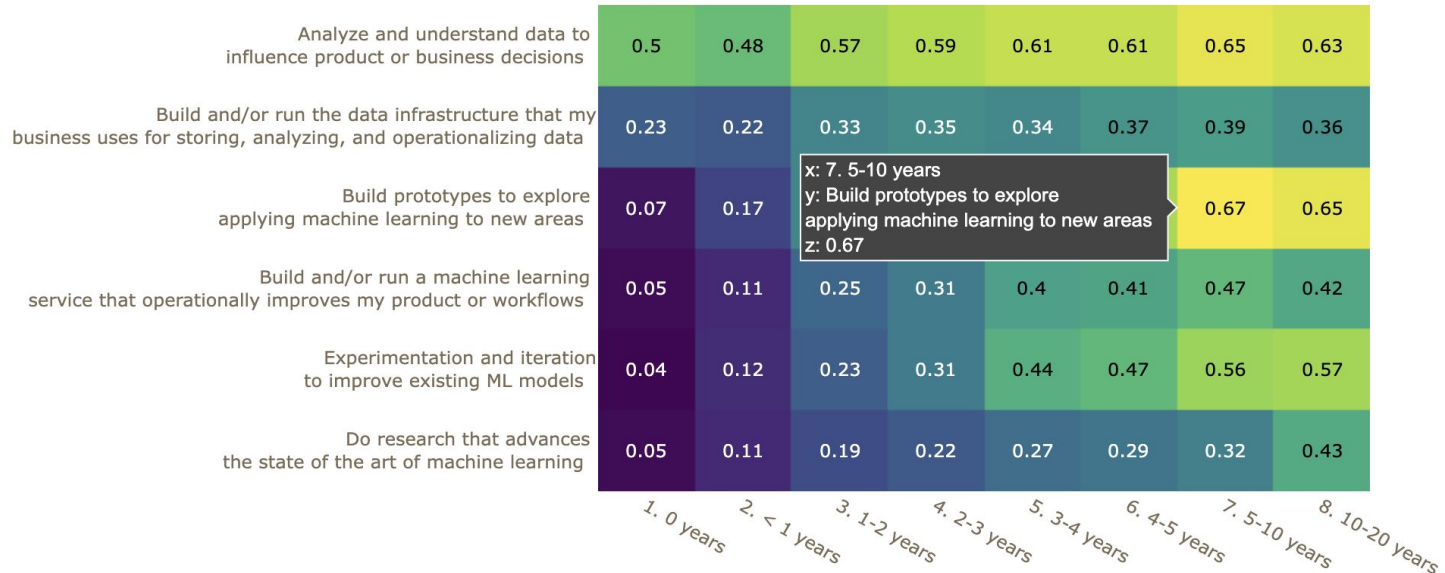
- Understanding tasks of data analyst, scientist, research scientist, ML engineer and how their tasks are often inter-linked in different stages of ML usage.

DATA TO ACTION

HEATMAP

Experience(years) for different responsibilities in Machine Learning domain

This helps us understand the level of ML experience needed to perform an activity.



INSIGHTS

- Percentage of respondents at a particular Machine Learning experience level for each responsibility. This helps us understand the level of ML expertise needed to perform a task.



CONCLUSION

- ❑ AI adoption is growing in online services, insurances, and tech companies.
- ❑ Big companies lead AI adoption despite smaller companies being better candidates for implementation.
- ❑ AWS and GCP dominate cloud computing platforms in 2022.
- ❑ Top AI job roles are Data Scientist and Data Analyst with key skills in programming, ML frameworks, and algorithms.
- ❑ Transfer Learning is used mainly in Computer Vision tasks.
- ❑ Limited use of specialized hardware for ML training may cause bottlenecks in productionizing ML models.



**Any
Questions?**



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THANK YOU FOR THE TIME AND PATIENCE !
HAVE A GOOD DAY :)



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