



WELCOME TO DATA SCIENCE & MACHINE LEARNING

Some guidelines



Listen-only mode



Type your questions in Q&A
box



Ask questions which are in the interest of the larger audience

Agenda

- DSML program vision
- Learning philosophy
- About MIT-IDSS & Great Learning
- Program details
- Q&A

Program Managers



Madiha Musarrat
October 2022 - A



Vartika Misra
October 2022 - B



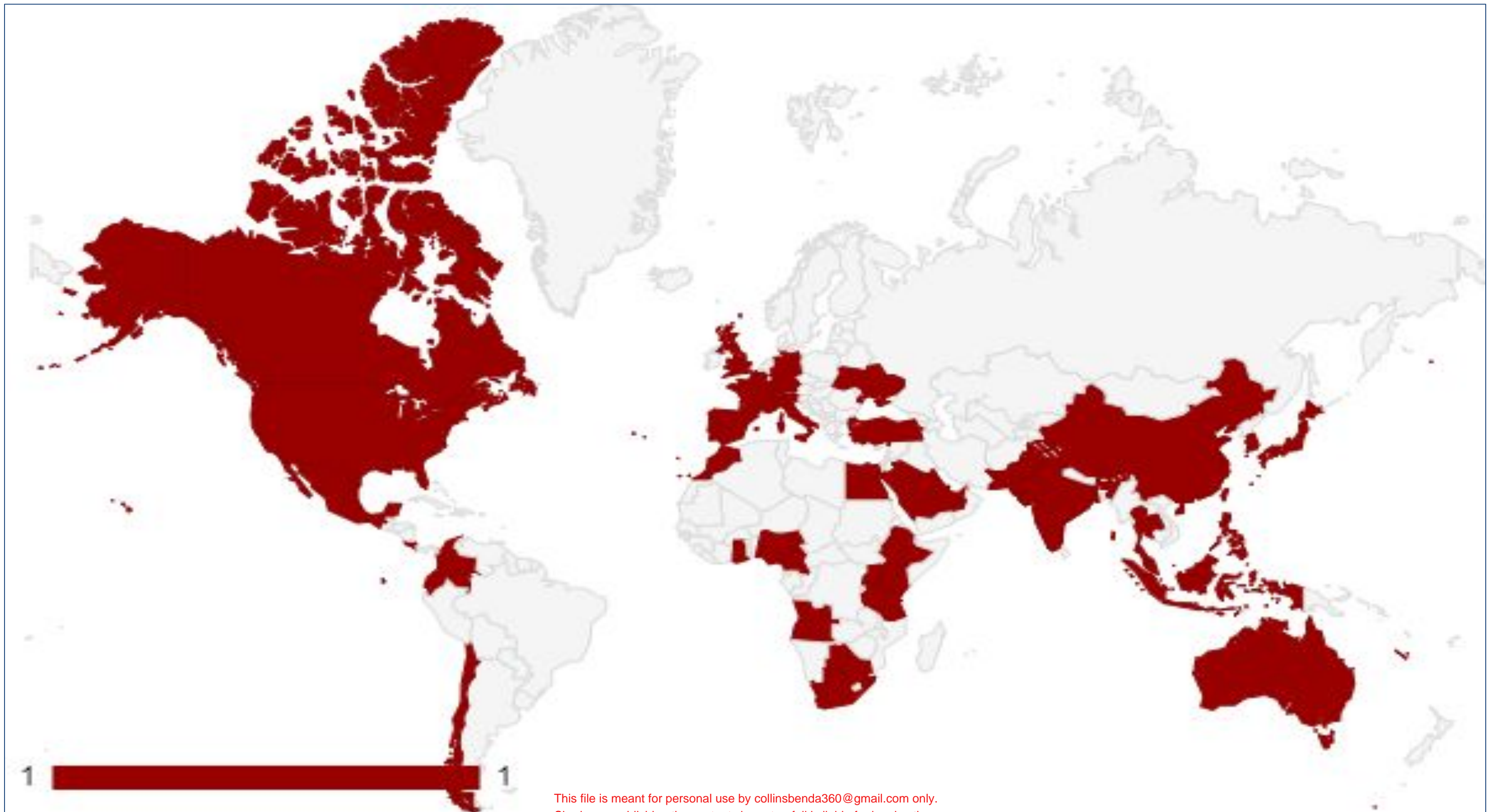
Rohit Negi
October 2022 - C

DSML October 22 Cohort

300+ Learners

55 Countries

30+ Industries



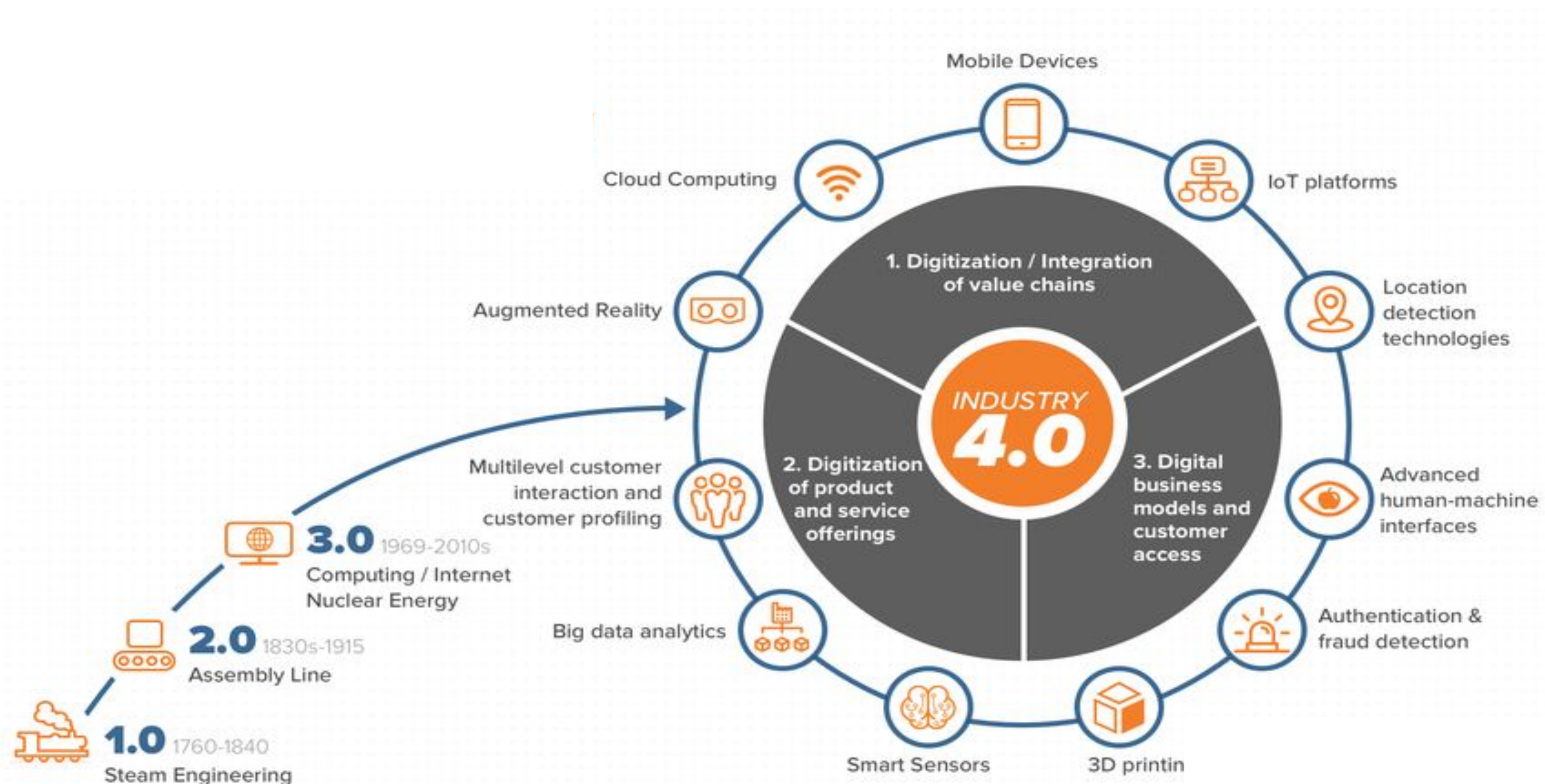
Panelist



Angel Das Data Science Consultant - IQVIA Asia Pacific

- Worked at Mu Sigma Business Solutions, Novartis India, Novartis Australia & NZ
- 7 + Years of experience in advanced analytics - professional and management consultant
- Hold experience of working in brand analytics with Fortune 500 companies.
- Institutionalized analytics for a leading US Pharmacy retailer by creating a Big Data Strategy Roadmap.

Why Data Science & Machine Learning?

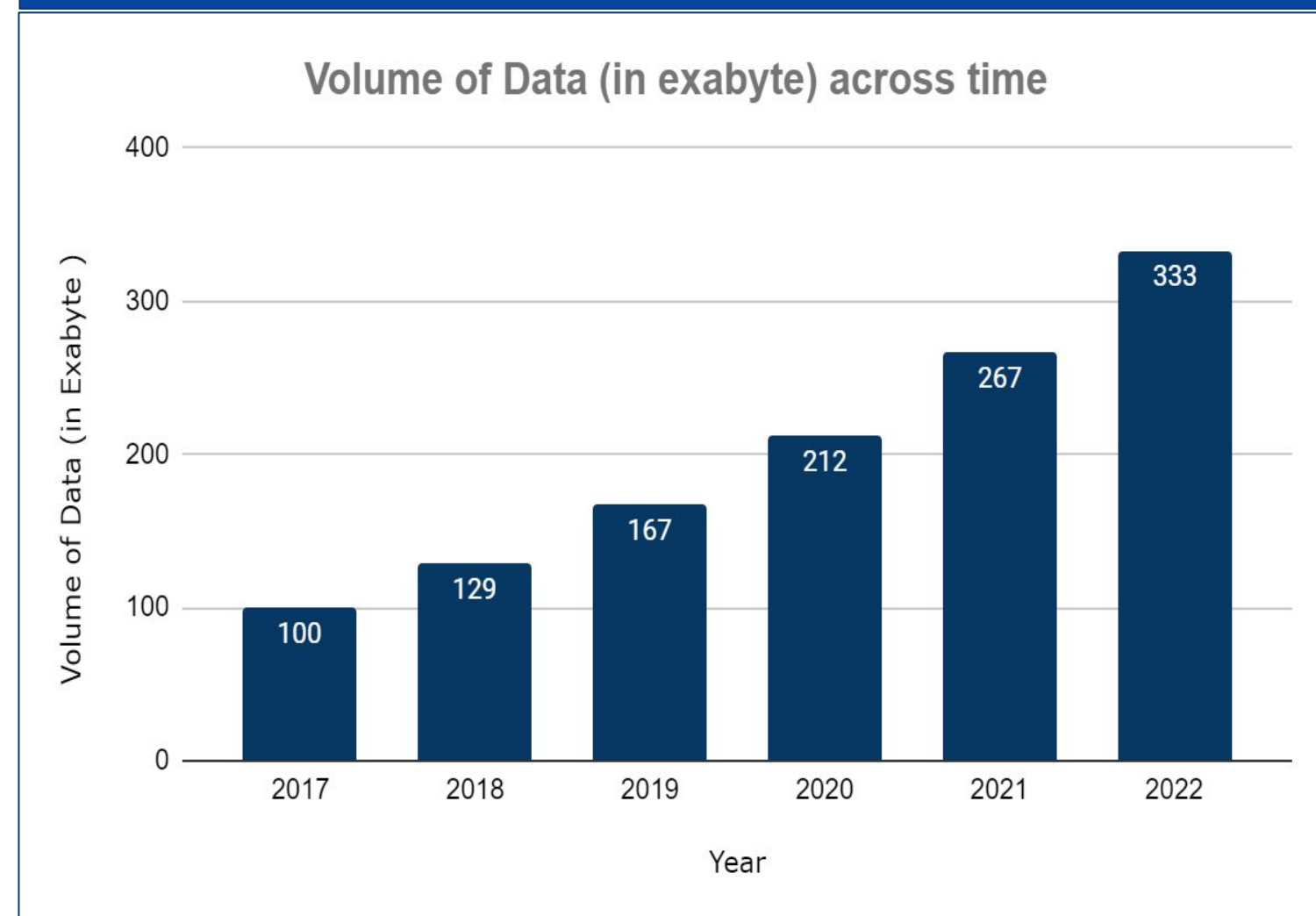


Source : <https://shockoe.com/ideas/underst&ing-impacts-fourth-industrial-revolution/>

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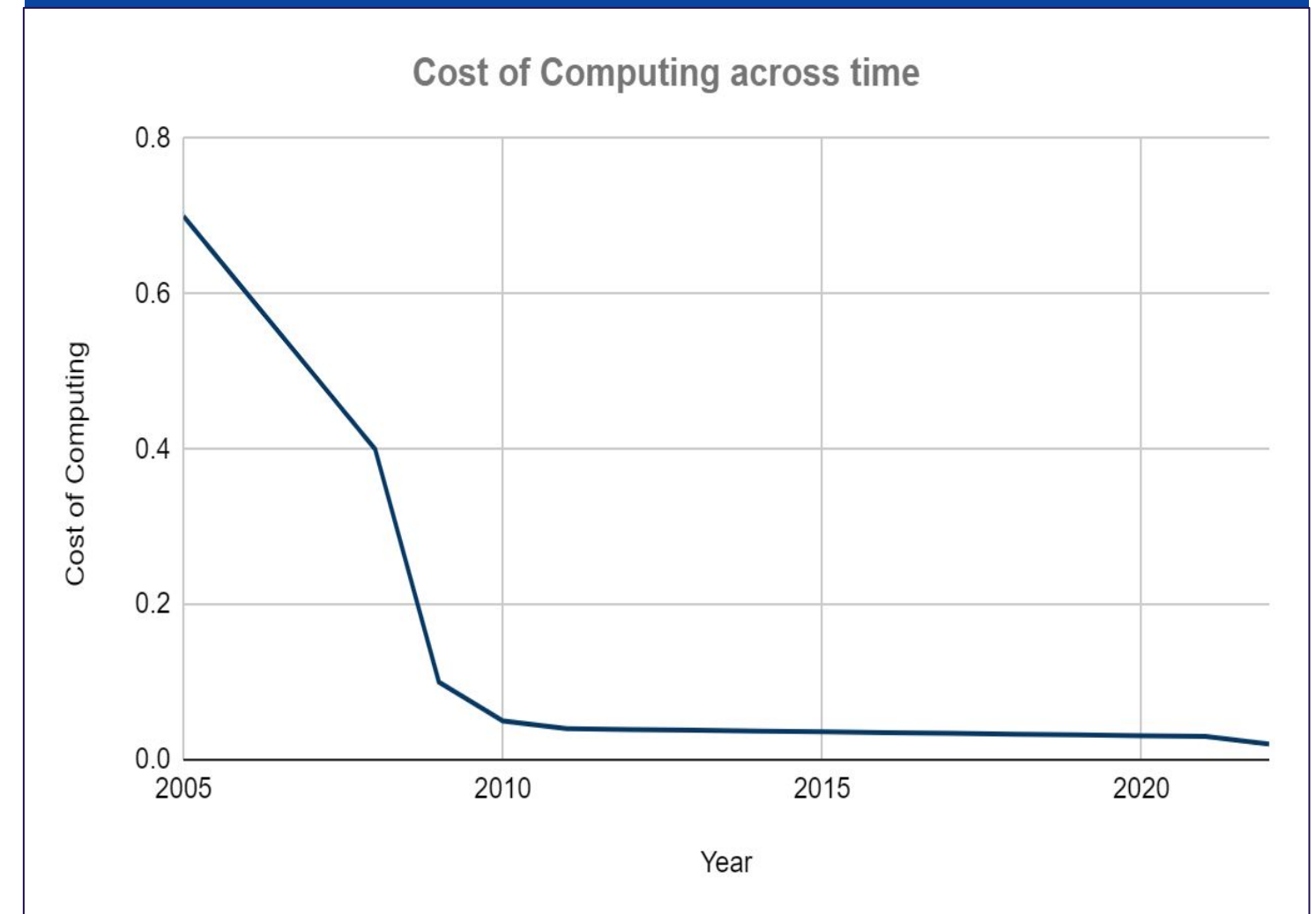
What is driving this?

Amount of data being generated



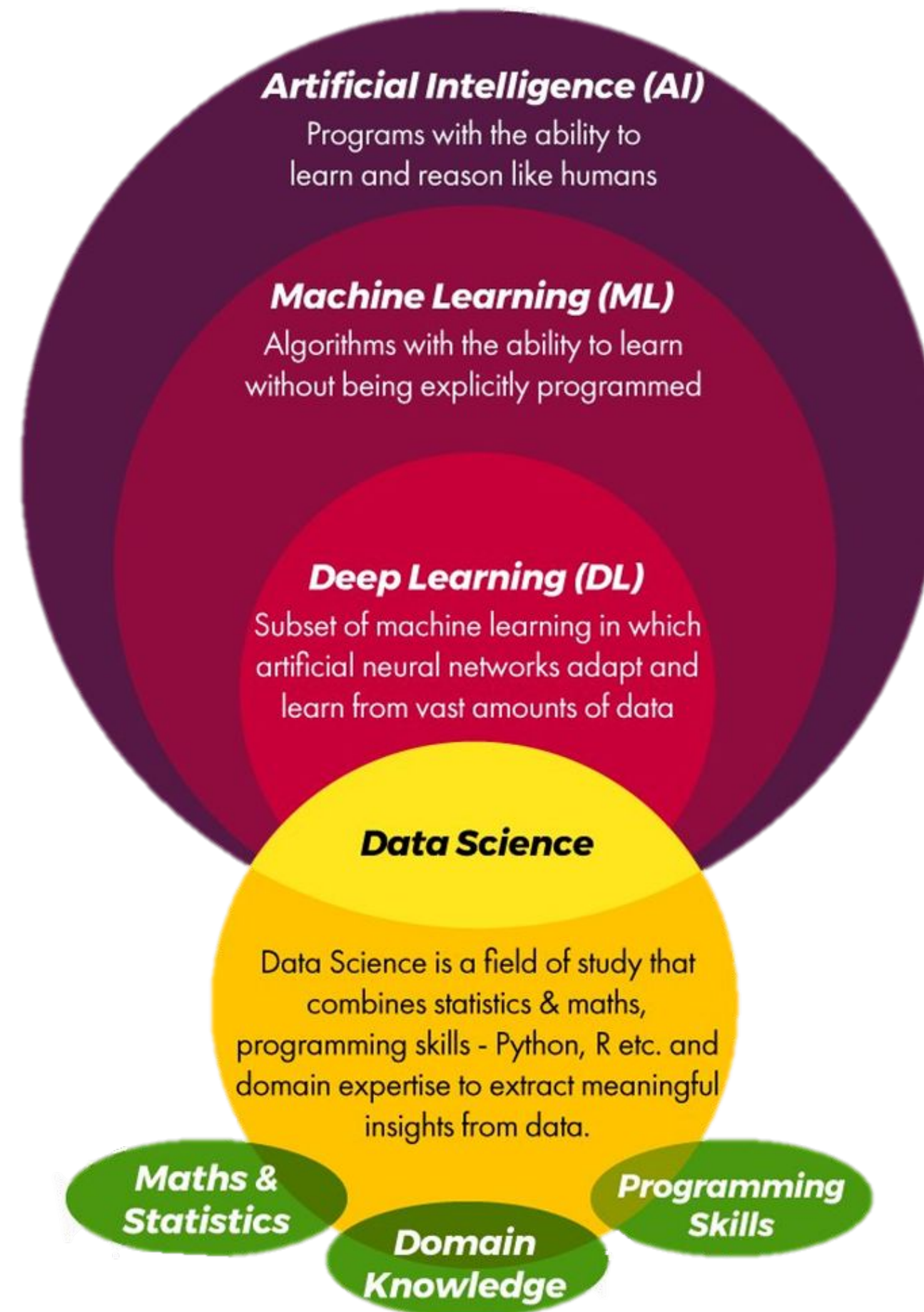
Source:
<https://www.statista.com/statistics/267202/global-data-volume-of-consumer-ip-traffic/>

Cost of computing resources



Source:
<https://cmte.ieee.org/futuredirections/2017/10/18/a-never-ending-decrease-of-technology-cost/>

Key definitions

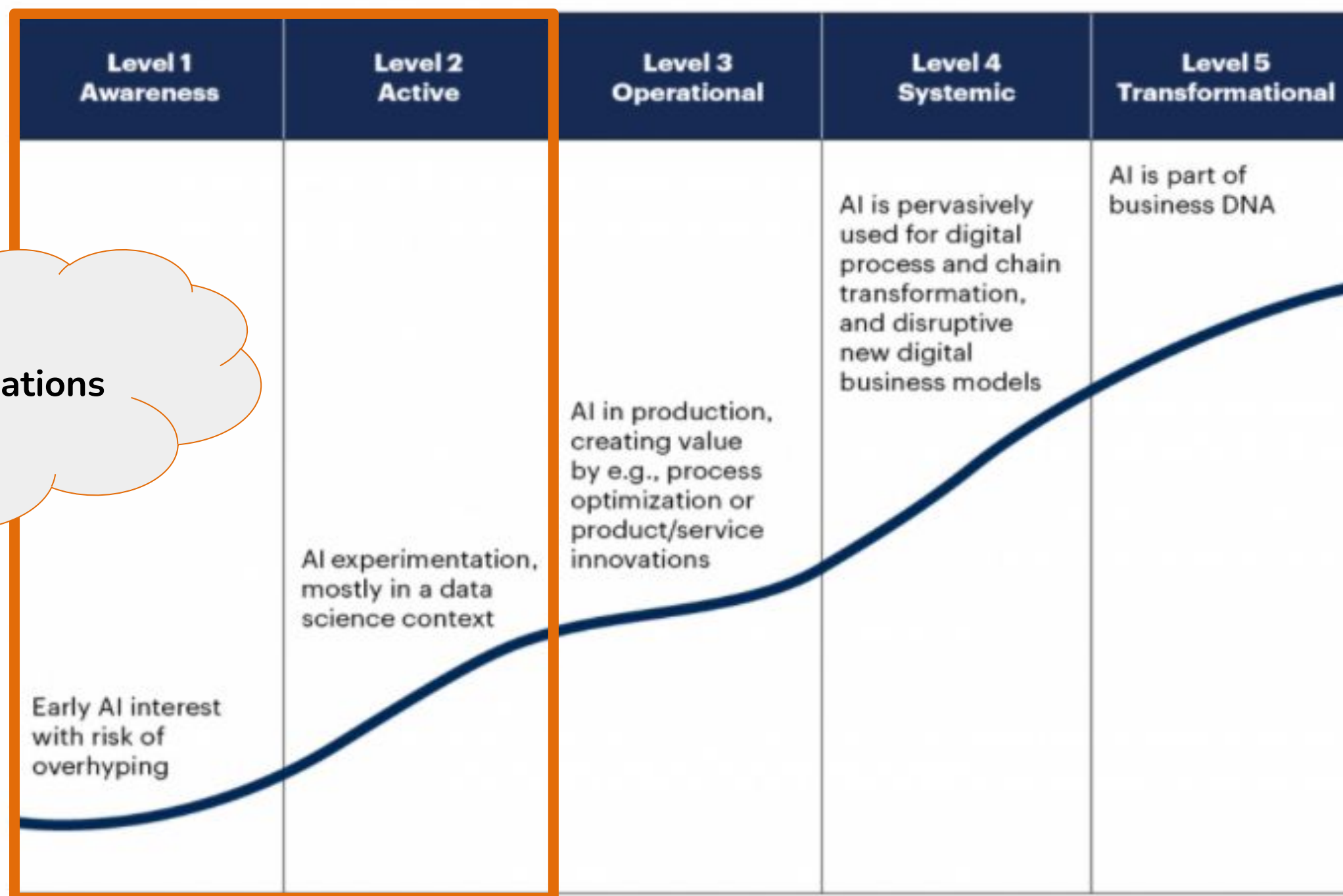


What you need to focus on



How mature is the AI in your organization?

AI Maturity Model

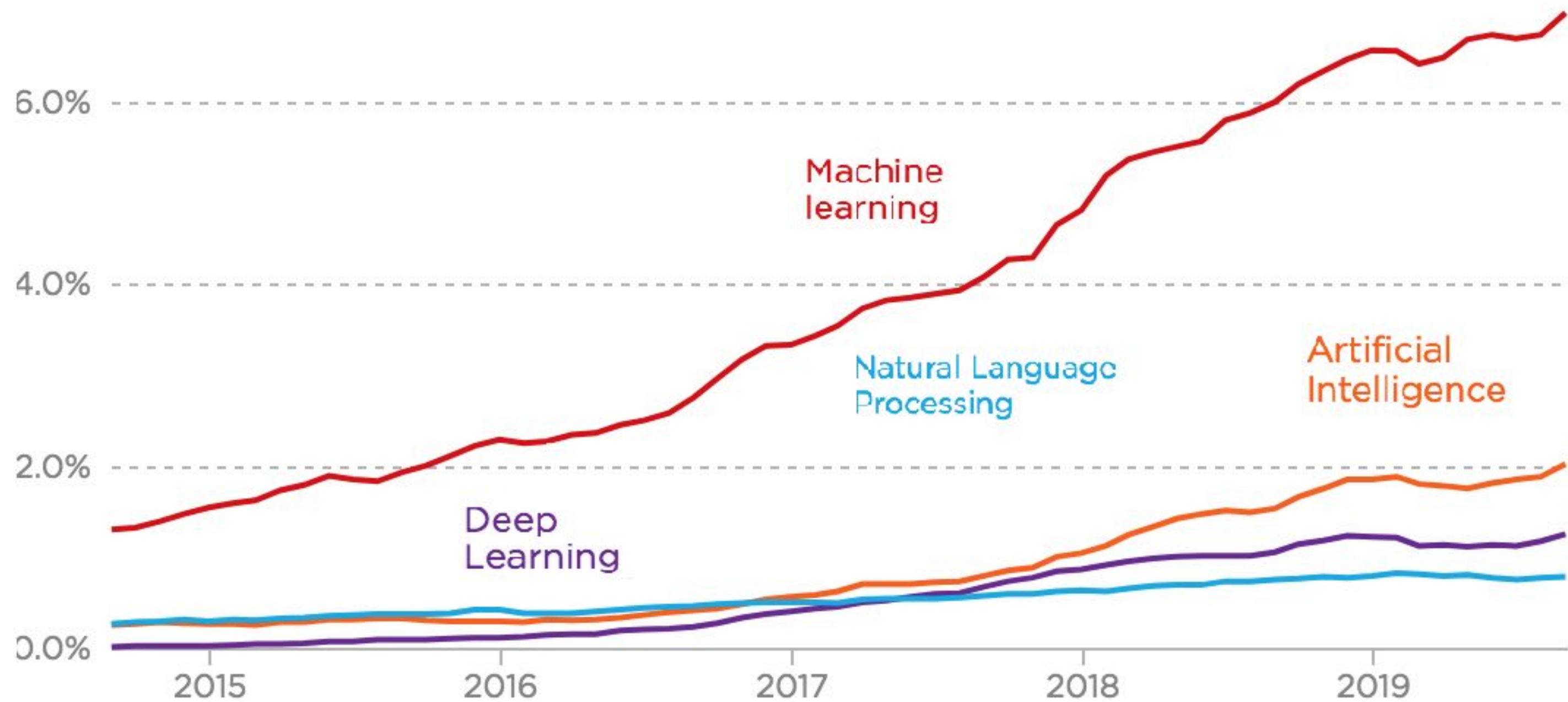


gartner.com/SmarterWithGartner

Source: Gartner
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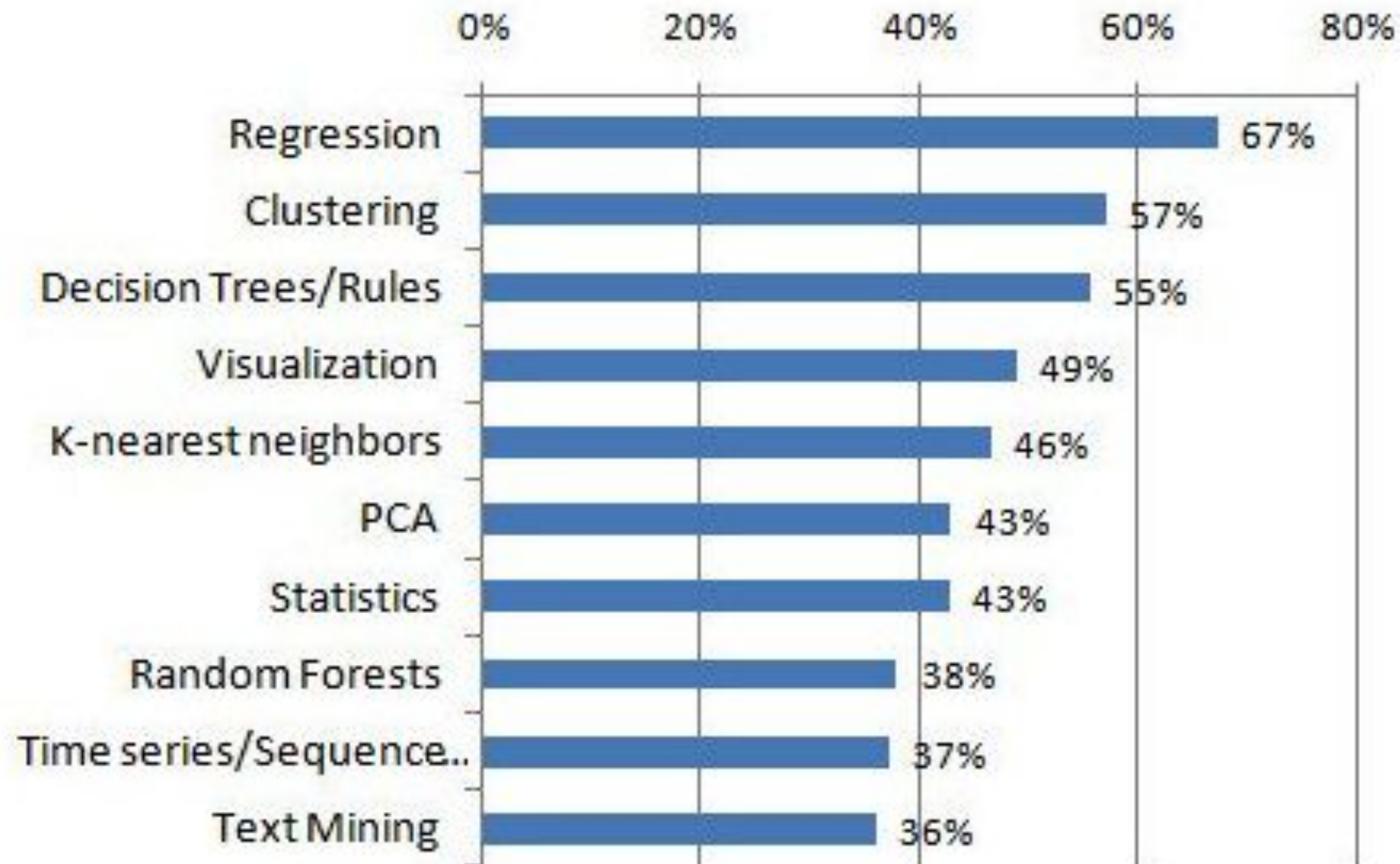
Understand the skills your firm needs



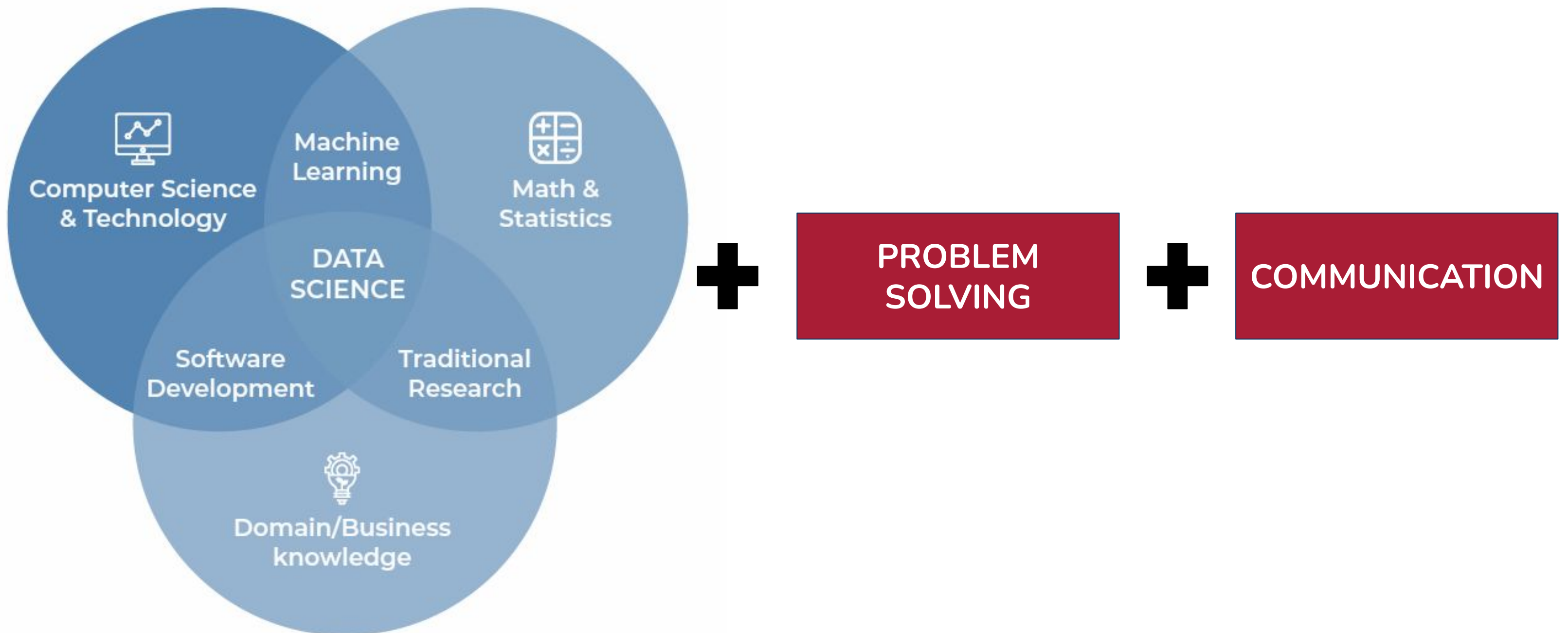
Source: Indeed

Focus on fundamentals

Top 10 Algorithms & Methods used by Data Scientists



Foundational Skills to success in 'new era'



Data Science & Machine Learning (DSML) - Vision

Future focused professional skills



Data Science Methods, Techniques & Algorithms



Mathematical /
Conceptual
Foundations

Problem Solving &
Interpretations

Industry Perspective

Key Learning Outcomes

Strong foundations in
data science
techniques &
algorithms

1

Understanding of the
contemporary
approaches & work in
data science field

2

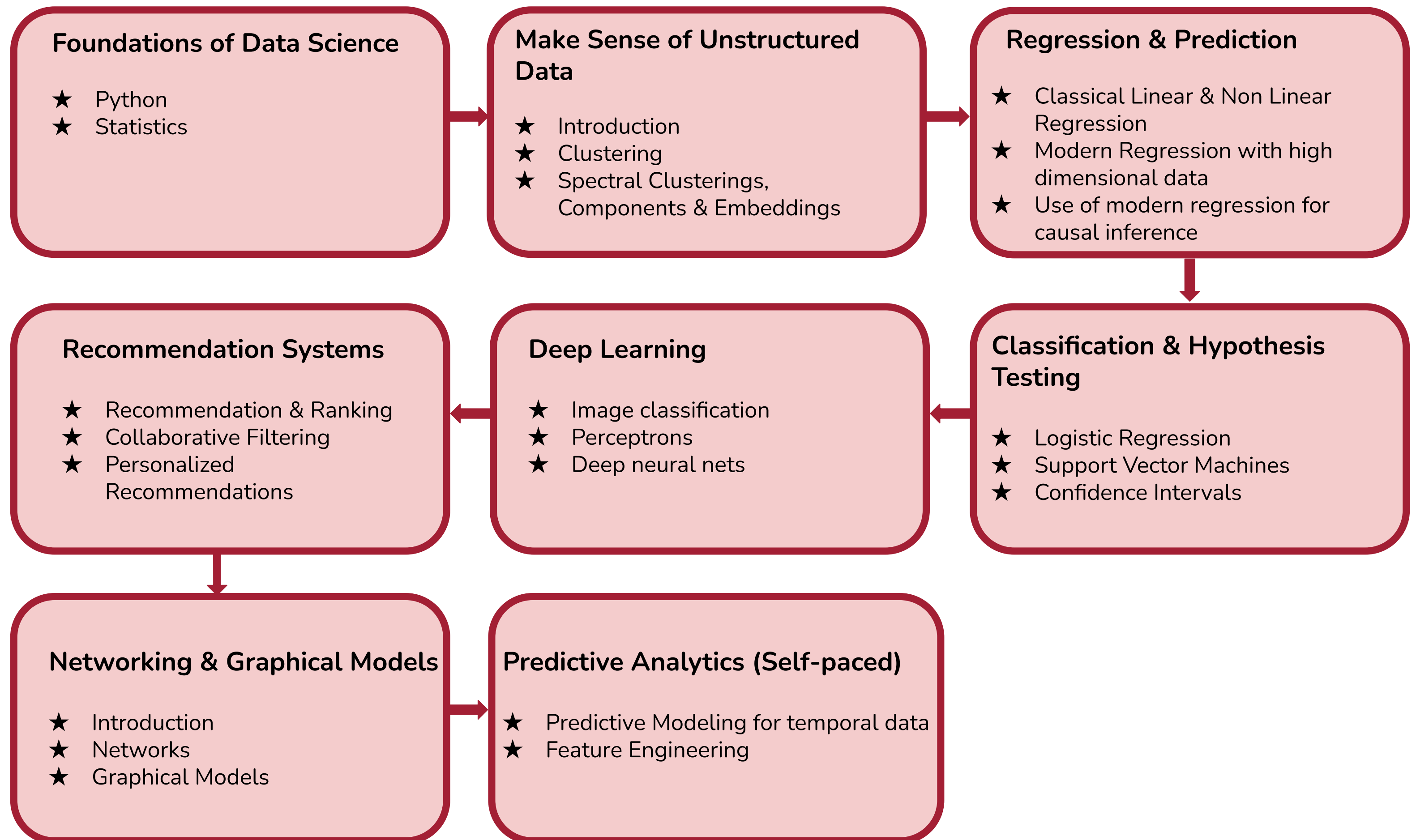
Exposure to business
problems solving
using the right set of
techniques/algorithms

3

Who is this program for?

- Working professionals, from early career professionals to senior managers who are interested in a career in Data Science & Machine Learning
- Working professionals interested in leading Data Science & Machine Learning initiatives at their companies
- Entrepreneurs interested in innovation using Data Science & Machine Learning
- Tech professionals with exposure to data will have an edge however, if you do not have technical background or exposure to data, you will have to put extra efforts to take advantage of the MIT program

Program Structure



Collaboration: MIT & Great Learning

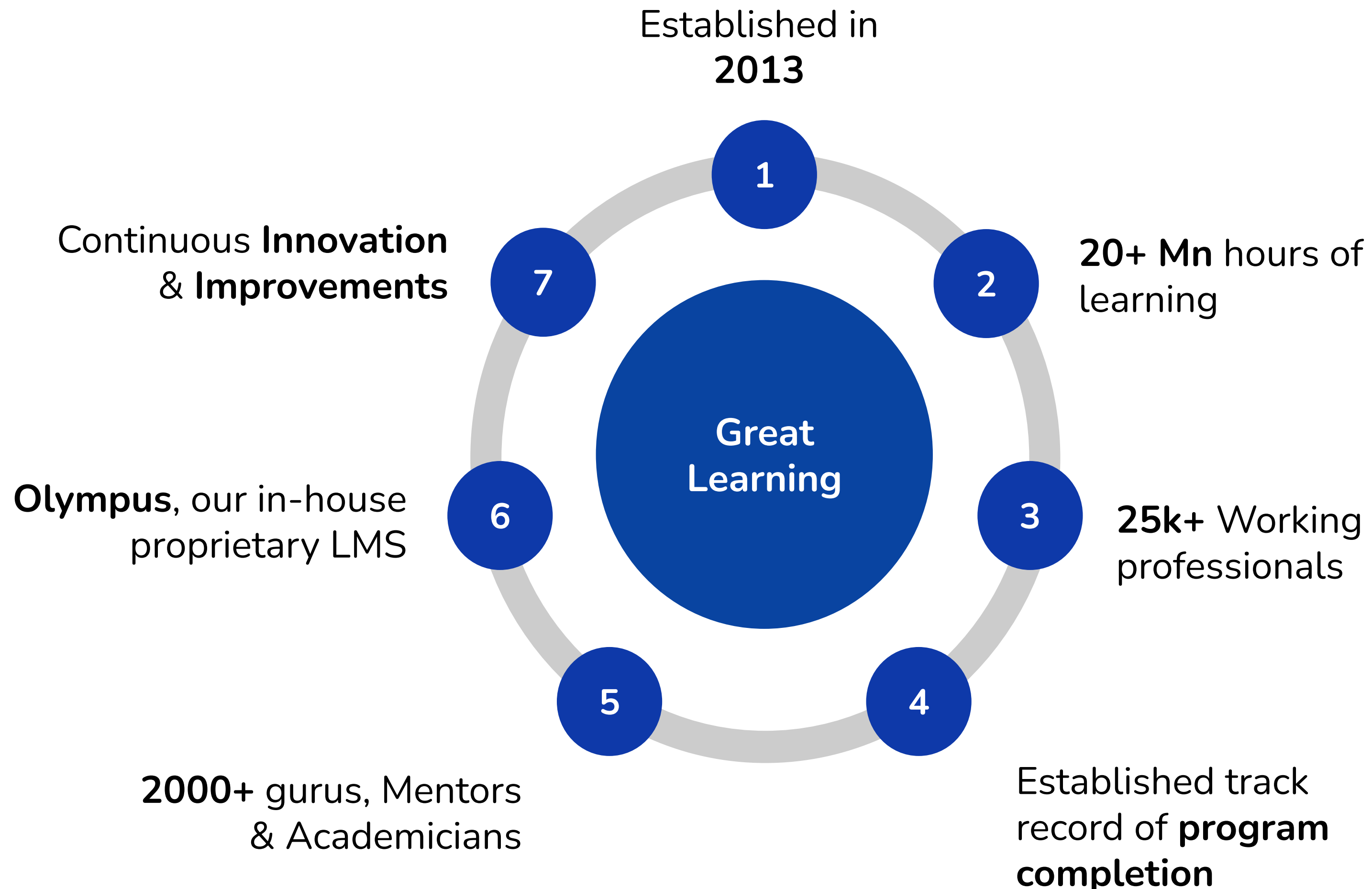


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- **Academic Collaborator**
 - Curriculum & content design
 - Recorded Video lectures
 - Case studies / Projects
 - Certificate



-
- **Delivery Collaborator**
 - Mentored learning
 - Learning management system
 - Program Manager
 - Academic support

About Great Learning



The Learning Philosophy

- Have a clear learning path that is well-structured, as well as comprehensive
- Access to content from credible academic faculty
- Learning by doing - practice case studies with actual problem-solving
- Have access to a mentor who can clarify doubts & provide industry perspective
- Be tested frequently & get personalized feedback to be aware of the progress
- Have a support available during tough times
- Have access to peers to network

Approach to learning

Traditional Classroom

- Instructor prepares material to be delivered in class
- Learners listens to lecture in-class, and other guided instructions and takes notes
- Homework and assignments to demonstrate learning

Flipped Classroom

- Instructor records and shares lecture outside of class
- Recorded Lectures and content to be watched before the session
- **In-class** learning includes applied learning and **higher order thinking tasks**
- Support through peers and Mentor

Program features



8 learning weeks
3 learning breaks
1 Self-paced modules



Recorded video lectures by
MIT faculty



3 Projects where you apply your
learnings from the course to actual
data sets



Case studies
Hackathon



Mentored learning sessions by
the industry experts

- Case study discussions
- Doubt clarification by mentors
- Industry knowledge

DSML October 2022 Delivery Schedule

Data Science and Machine Learning Delivery Schedule 22 Oct 2022					
Course	Topic	Content Release Date	Assessment Deadline	Weekend Starting (Sat)	Mentored Learning Session
Prerequisite	Python Programming and Basic Statistics & Probability	Available on enrollment			
Foundations of Data Science	Python for Data Science	20-Oct-2022	30-Oct-2022	29-Oct-2022	Yes
	Statistics for Data Science	27-Oct-2022	6-Nov-2022	5-Nov-2022	Yes
	Project 1	27-Oct-2022	6-Nov-2022	-	
	Learning Break			12-Nov-2022	
Making Sense of Unstructured Data	Introduction, Clustering, Spectral Clustering, Components, and Embeddings	3-Nov-2022	20-Nov-2022	19-Nov-2022	Yes
	Learning break w/ Hands-on Masterclass 1			26-Nov-2022	
Regression and Prediction	Classical Linear and Nonlinear Regression and Extensions, Modern Regression with High-Dimensional Data, The Use of Modern Regression for Causal Inference	17-Nov-2022	4-Dec-2022	3-Dec-2022	Yes
	Learning break w/ Hands-on Masterclass 2			10-Dec-2022	
Classification and Hypothesis Testing	Hypothesis Testing and Classification	1-Dec-2022	18-Dec-2022	17-Dec-2022	Yes
	Project 2	1-Dec-2022	18-Dec-2022	-	
	Christmas & New Year Break Learning Break w/ Hands-on Masterclass 3			24-Dec-2022 7-Jan-2023	
Deep Learning	Deep Learning	15-Dec-2022	15-Jan-2023	14-Jan-2023	Yes
Recommendation Systems	Recommendations and Ranking, Collaborative Filtering, Personalized Recommendations	12-Jan-2023	22-Jan-2023	21-Jan-2023	Yes
	Project 3	12-Jan-2023	22-Jan-2023	-	
Networking and Graphical Models	Introduction, Networks, Graphical Models	19-Jan-2023		28-Jan-2023	Optional Masterclass
Self-paced Modules					
Predictive Analytics	Predictive Modeling for Temporal Data, Feature Engineering	25-Jan-2023		4-Feb-2023	Optional Masterclass
	Hackathon		3-Feb-2023	5-Feb-2023	PM will share the details
	Closing Ceremony			11-Feb-2023	PM will share the details
Note: The schedule is subject to change based on any improvements in the program structure or the availability of the mentor. Assessment here means either a Quiz or a Project. Mentored learning sessions and additional sessions will either happen on Saturdays or Sundays or the weekend.					

Weekly Operating Rhythm



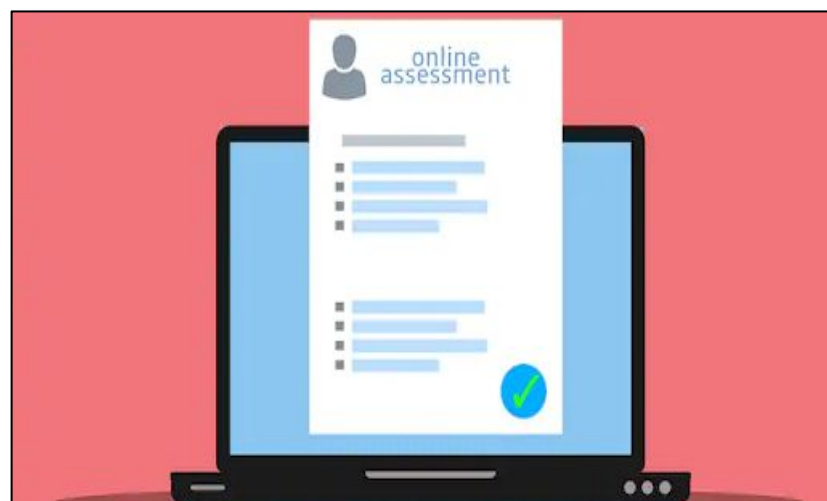
Weekdays (Monday - Friday)

- Pre-reads
- 2-3 hours Recorded faculty video lectures
- Practice exercises



Weekends (Saturday - Sunday)

- Mentored learning session
- Hands-On Master class during learning break
- Optional Masterclass for the self-paced module



Assessment

- Weekly course assessments
- Projects with weekly deadlines in 3 courses

Assessments are weekly

In order to be eligible for the certificate, you will have to complete all courses with minimum of 60% marks in each course.

Weekly Course Assessment

- 7 deadline driven Course assessment
- 1 assessment per week

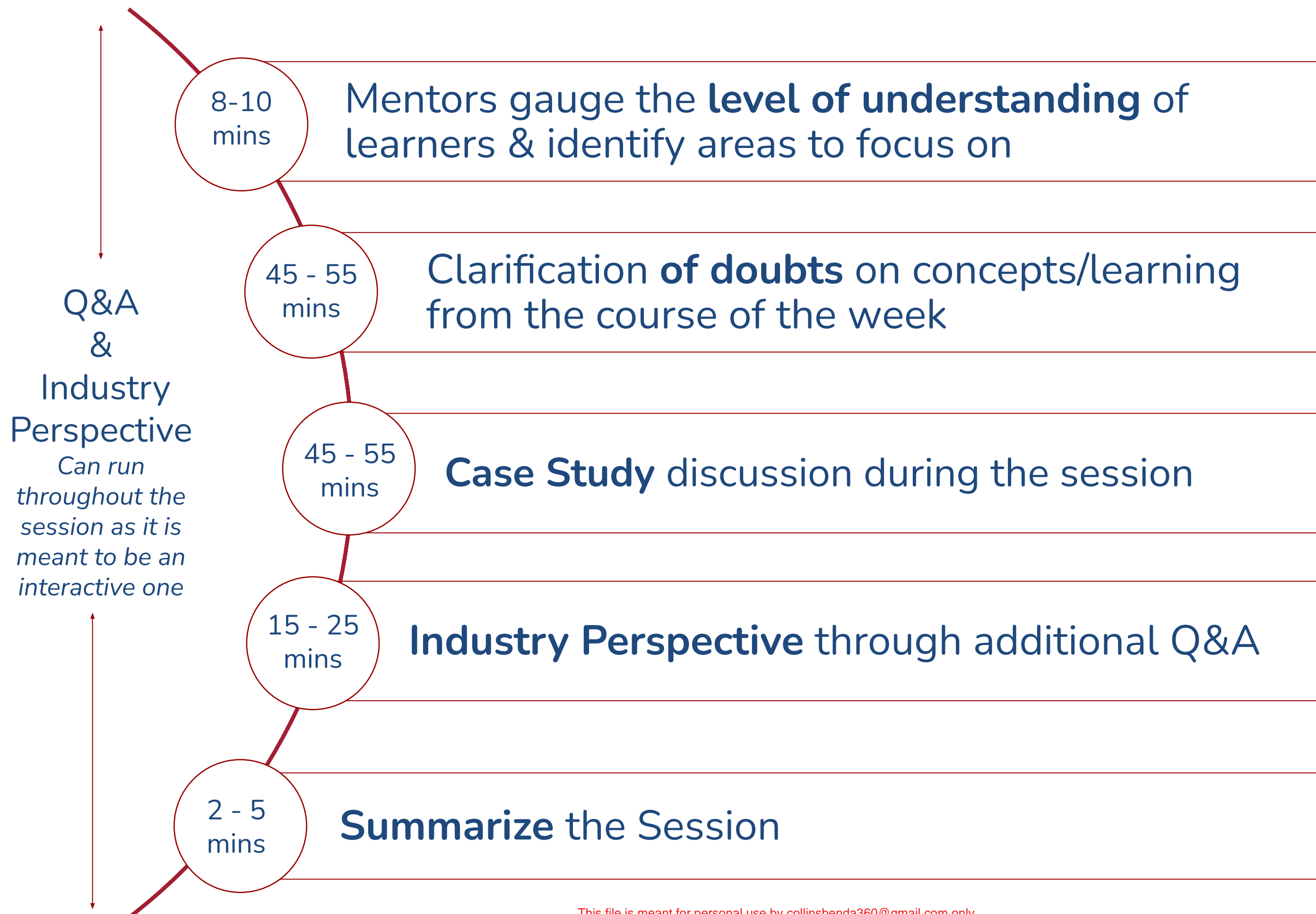
Projects

- 3 deadline driven projects
- 1 project each in the following course:
Foundations of Data Science, Classification and Hypothesis Testing & Recommendation Systems

***Assessments in every course carry 90% weightage**

***Attendance of the mentored learning sessions carries 10% weightage**

Mentored Learning Session Structure



Mentored Learning Groups

- ~20 learners in a group
- Factors:
 - Geography and your time zone
 - Profile - Programming experience/Work experience
 - Academic Background
 - Mentor availability
- Either Saturday or Sunday

Timings will be communicated in the coming week

Additional Webinar Sessions

Hands-On Masterclass:

- Focus on implementation of the conceptual knowledge gained in the previous week towards solving a problem based on real-world data.
- Focus on the practical application through case studies for the topics of the previous week, these sessions further clarify the content from a programming perspective.
- 3 Hands-on masterclasses on the following topics: Making Sense of Unstructured Data, Regression & Prediction, and Classification & Hypothesis Testing
- 2-hour session in a webinar format, dedicated to exploring the application of these concepts to a hands-on business case study
- Conducted by an industry expert for the cohort in a Masterclass format
- Attendance doesn't carry weightage in the marks for the course.

Learning Support Ecosystem



How to learn more effectively?

Commit to the journey

- 8-12 hours per week
- Follow the weekly operating rhythm
- Attend the mentored learning sessions
- Respect Assessments

Make the most of the content

- Take detailed notes of videos
- Raise support queries on Olympus wherever you need help
- Go through all the additional reading materials shared

Prepare well for all sessions

- Go through the weekly content before the sessions

Practice, Discuss, Repeat

- Go through the case studies & practice them
- Discuss with peers & mentor
- Read, explore & concretize

Give us a lot of feedback

- Be *Descriptive* – Take the time to detail your feedback
- Be *Constructive* – How can your learning be improved?
- Be *Specific* – Use instances, examples, etc.
- Be *Realistic* – We are balancing the whole class' needs

CALL OUT >> WE ASK FOR A LOT OF FEEDBACK
These are discussed in the leadership meetings

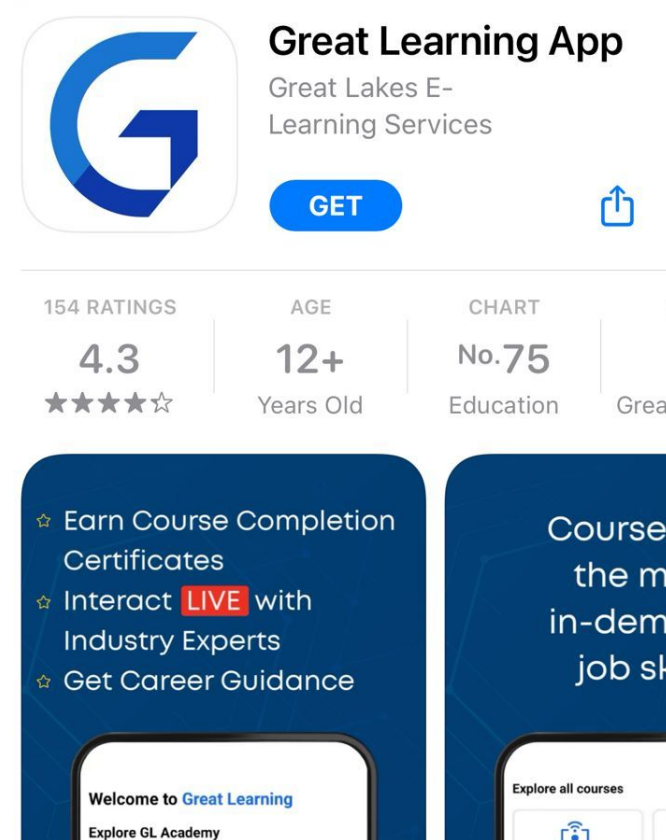
Tools & Technology

olympus.mygreatlearning.com



The image shows the Olympus Login page for Great Learning. It features the Great Learning logo at the top, followed by the text "Olympus Login". Below this, there are two input fields: "Email Address" and "Password". The "Password" field has a toggle icon (an eye) to the right of it. At the bottom left, there is a link "Forgot password?". At the bottom right, there is a blue "Login" button.

Great Learning App



Online Sessions



Resume and LinkedIn Profile Review

Present yourself in the best light through a profile that showcases your strengths:

- Feedback from experts to make your resume and LinkedIn profiles stand out from the crowd.
- Tips on customizing your resume for the job profile you are applying to.

GL Community

- GL Community is our peer connectivity Platform with over **10,000 members**
- Browse through the Topics and groups and be in sync with the latest developments in the industry even after you graduate.

[Dashboard](#) [Courses](#) [Excelerate](#) [Community](#)

- **Ask Questions**, Start a Discussion or Write a Blog
- **Practice** your skills by answering Questions on the platform and Get help in understanding technical concepts and debugging issues
- **Engage**, learn and connect with your peers and experts


All Topics

 Python

 Statistics


 SQL


 Question of the Day ...

 Weekend Challenge ...

 Careers

MY GROUPS

 Artificial Intelligence

 Machine Learning

Question

Discussion

Blog

TE

What's your question?

 Photo/Video

 File

☐ Poll

Select Group ▼

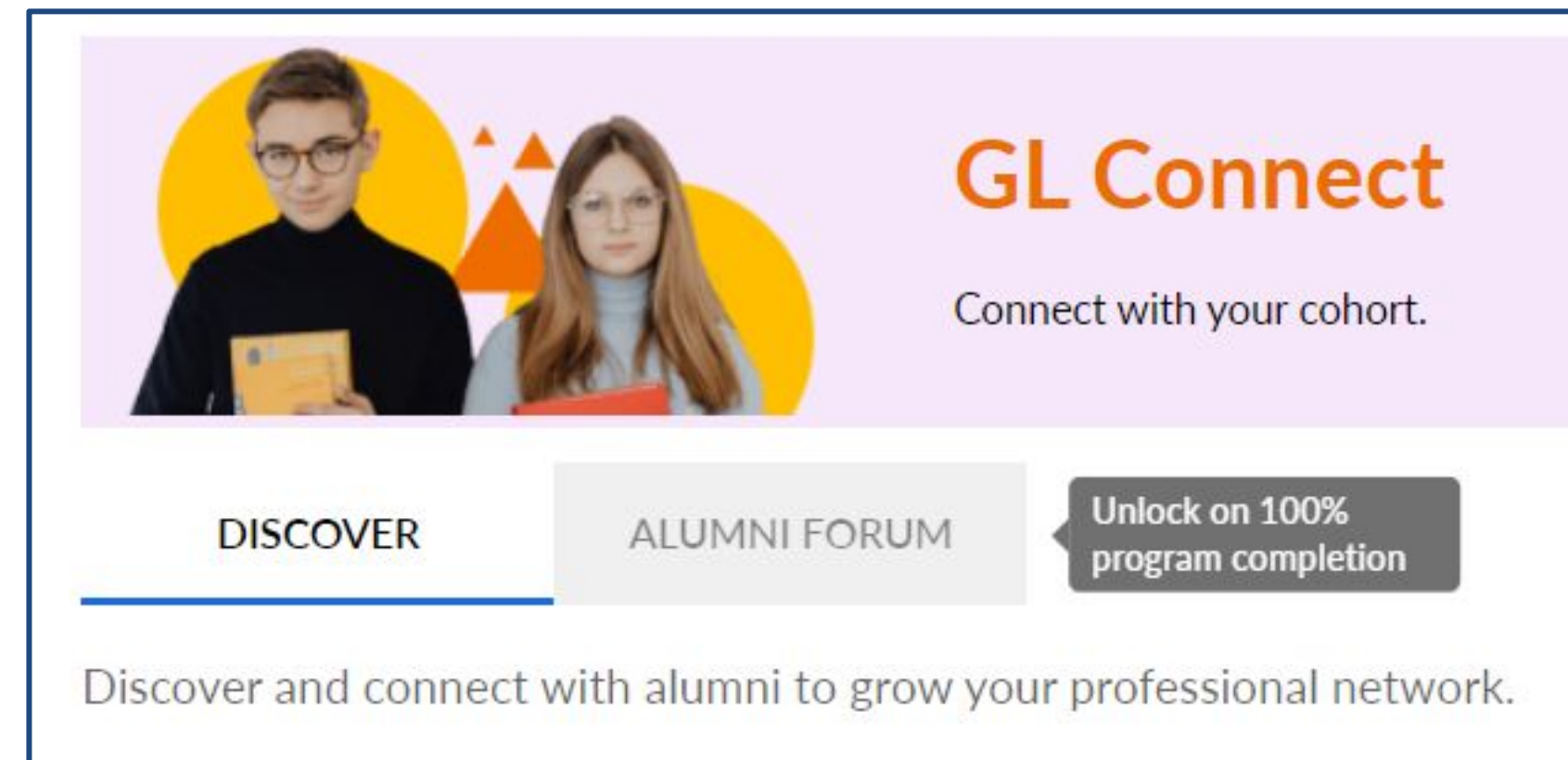
Add Topics

Ask

GL Connect

[Dashboard](#) [Courses](#) [Excelerate](#)  GL Connect New

- GL Connect is where you can message and connect with your cohort's learners.
- It will be accessible post completion of the program



Next Steps

Login to Olympus - olympus.mygreatlearning.com

- Complete your profile on Olympus
(Name, linkedIn profile, contact details)
- Update your time zone on Olympus

Go through the following courses

- Pre-work
- Foundations of Data Science

- Join the first mentored learning session on the weekend of October 29/30
(Link will be available under UPCOMING/ONGOING Activities on dashboard)
- Submit the weekly quiz before the deadline & in case of any questions,
kindly raise a support request on Olympus through the 'Need Assistance'
option



Q&A

Any Questions?

Thank You

We'd love to hear your feedback!

Please share your feedback for the Orientation session

Wish you all the very best!

Please feel free to raise a support request through Olympus