



# Developing a Data Culture Training: Part 3

Empowering Your Team to Become Citizen Data Scientists



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# Introductions



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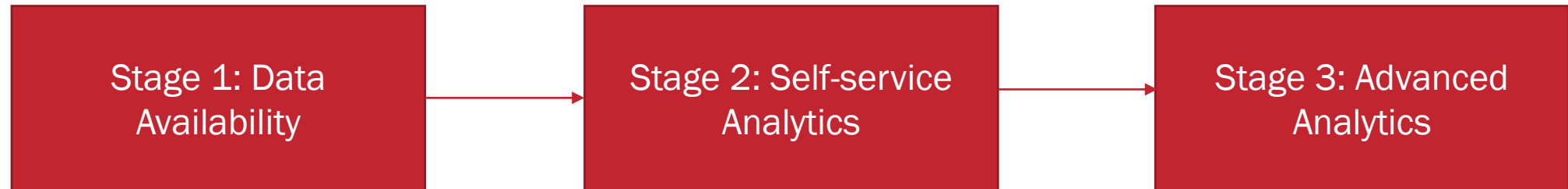
# | Agenda

- What is a Citizen Data Scientist and value do they bring?
- How does this role complement the specialist data scientist?
- Demo on how to build a machine learning model with no code on Azure



# The Rise of the Citizen Data Scientist

# Maturing Your Data Culture

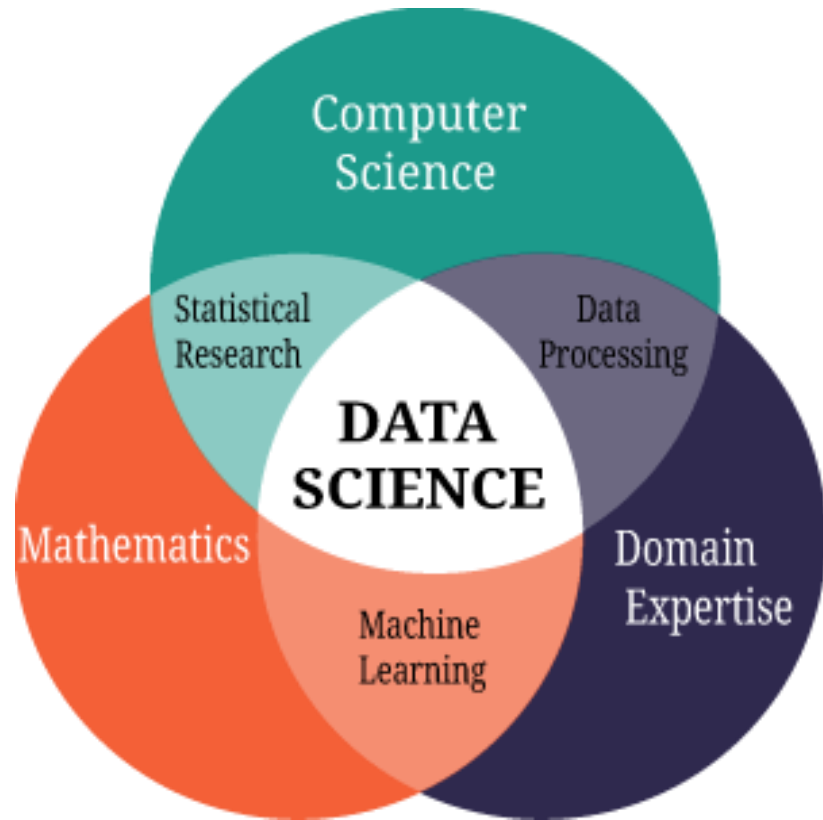


- Break down data siloes
- Data is available in a data lake
- Control over who can access what and when

- Teams can access the data they need when they need it
- Ability to connect to data lake and analyze or visualize

- Synthesis of advanced solutions from many data sources
- Full spectrum view of data

# What is Data Science?



The application of advanced analytical techniques from computer science, mathematics, and statistics to solve challenging problems using data

This may include things like:

- Big data processing
- Machine learning
- Statistical modelling
- Experimental design and hypothesis testing

# The Citizen Data Scientist

“A person who creates or generates models that use advanced diagnostic analytics or predictive and prescriptive capabilities, but whose primary job function is outside the field of statistics and analytics”

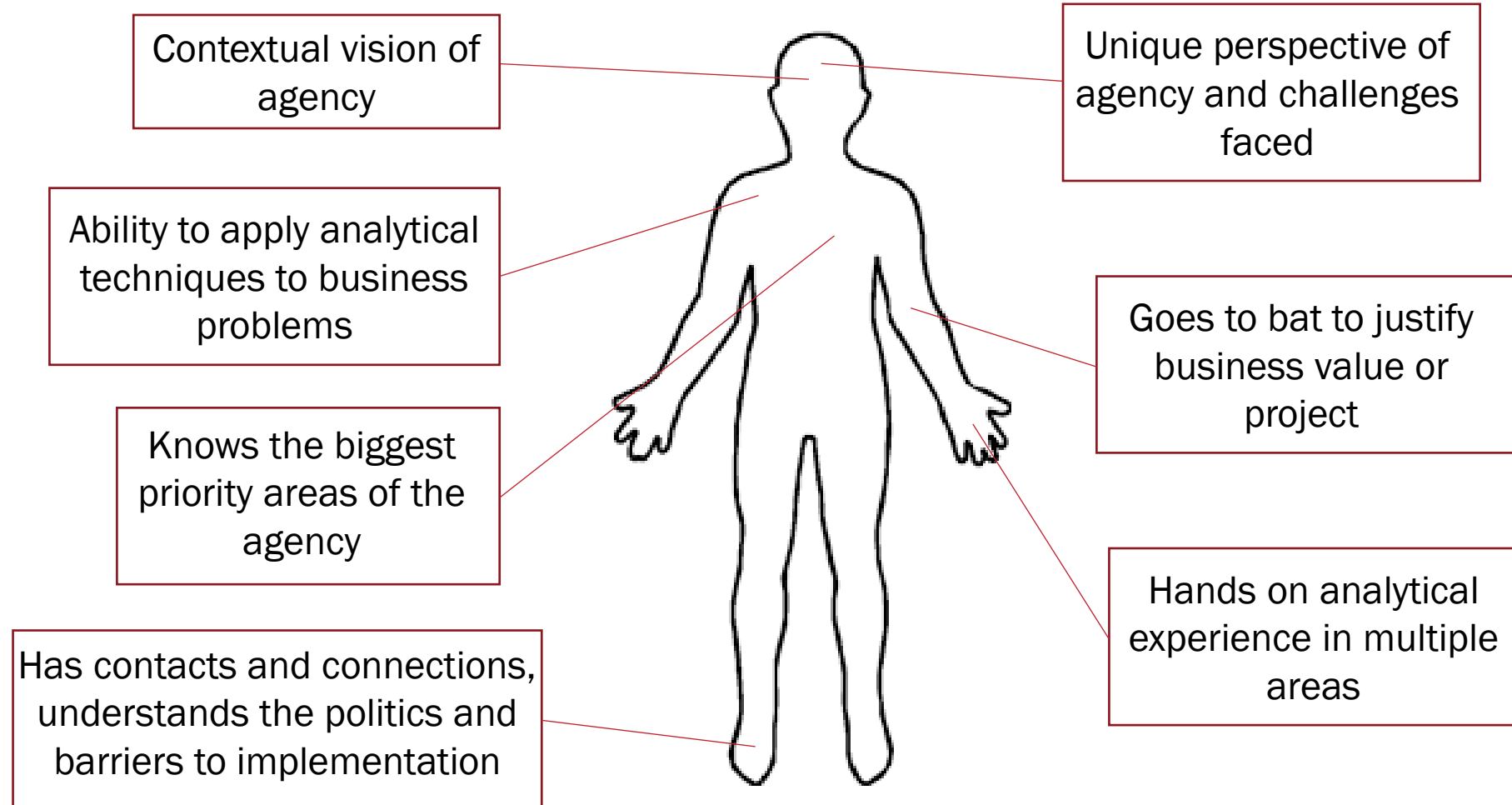
*Gartner, “Citizen Data Science Augments Data Discovery and Simplifies Data Science”*



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# Traits Of the Citizen Data Scientist





# Who Might Your Citizen Data Scientists Be?



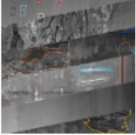




# Integrating Citizen Data Scientists Successfully

I know enough to be dangerous...

- **Mentorship** and **continuing education**
- Citizen data scientists develop **prototype** models based on **low risk** use cases
- **Peer review** from other technical staff and business stakeholders
- Professional Data Scientists **optimize** those models, and prepare them for **deployment**

# Kaggle – A Favorite of Citizen Data Scientists



18 Active Competitions		
	<b>Severstal: Steel Defect Detection</b> Can you detect and classify defects in steel? <i>Featured</i> · Code Competition · a month to go · manufacturing, image data	\$120,000 1,727 teams
	<b>Lyft 3D Object Detection for Autonomous Vehicles</b> Can you advance the state of the art in 3D object detection? <i>Featured</i> · 2 months to go · image data, object detection	\$25,000 138 teams
	<b>RSNA Intracranial Hemorrhage Detection</b> Identify acute intracranial hemorrhage and its subtypes <i>Featured</i> · a month to go · health foundations and medical research, image data	\$25,000 485 teams
	<b>The 3rd YouTube-8M Video Understanding Challenge</b> Temporal localization of topics within video <i>Research</i> · 13 days to go · video data, object detection	\$25,000 266 teams
	<b>Open Images 2019 - Object Detection</b> Detect objects in varied and complex images <i>Research</i> · 3 days to go · image processing, image data	\$25,000 544 teams



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# Kaggle – A Favorite of Citizen Data Scientists



Public Leaderboard Private Leaderboard

This leaderboard is calculated with approximately 33% of the test data.  
The final results will be based on the other 67%, so the final standings may be different.

[Raw Data](#) [Refresh](#)

■ In the money ■ Gold ■ Silver ■ Bronze

#	Team Name	Notebook	Team Members	Score ?	Entries	Last
1	@..@ HengCherKeng			0.92015	133	3h
2	MPWARE			0.91789	120	1h
3	vladimirsydor[ods.ai][AfterPa...			0.91775	83	3h
4	我歌唱每一座高山 我歌唱每一条...			0.91715	32	1d
5	Happy birthday			0.91690	32	9h
6	[ods.ai] KM			0.91679	114	16h
7	[ods.ai]Scizzzo			0.91591	35	3h
8	FIYM			0.91538	95	1d
9	earhian			0.91525	43	2h

The winning submissions will then go to the poster's data science team for further research and productionization



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# How Can I Get My Team Started?

- Microsoft Learning Paths
  - Machine learning crash course: <https://docs.microsoft.com/en-us/learn/paths/ml-crash-course/>
  - Create no-code predictive models: <https://docs.microsoft.com/en-us/learn/paths/create-no-code-predictive-models-azure-machine-learning/>
- Attend a Catapult Systems Approachable AI Event
- Experiment with some of the demos in Azure Machine Learning
- Enter a Kaggle competition
- Subsidize an online course – eg DataCamp, Coursera, Udemy all have good options



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# Azure ML Demo

How to build a no-code machine learning model with Azure Machine Learning



Q and A

