

DATA SCIENCE | INFINITY

The **Data Scientist** **2.0** Roadmap For The GenAI Era

Learn the AI tools, but build the
fundamentals that make them useful.



THE QUESTION

Does AI make Data Science pointless?

You might see this claim online, but the answer is no. Demand for people who can turn data into better decisions is likely to keep growing as AI adoption grows.

THE FEAR

"If AI can write code and build models, why learn Data Science?"

THE OPPORTUNITY

You are still early if you learn AI plus the fundamentals behind useful Data Science work.

THE MISTAKE

Beginners are chasing tools before judgement

GenAI, agents, Claude Code, Codex, RAG, and cloud tools matter. But they are not a substitute for understanding the work.

1

AI can help you move faster.

2

It can also help you make mistakes faster.

3

The difference is whether you understand the fundamentals well enough to check it.

THE REAL ADVANTAGE

AI helps with tasks. You still own the **thinking**

The hardest part was never just writing code. It was knowing what problem to solve, what to analyse, and what the result means.

FRAME

What problem are we actually solving?

JUDGE

Does this result make sense?

DECIDE

What should the business do next?

FOUNDATION 01

Start with data, not **AI tools**

If you cannot get, clean, and understand data, the newest AI workflow will not save the project.

1 Use SQL to query, join, group, and extract useful data.

2 Use Python to clean, reshape, explore, and prepare it.

3 Use GitHub to organise work and show credible project evidence.

FOUNDATION 02

Learn statistics so you know when to **trust the output**

AI can produce confident answers. Statistics helps you understand uncertainty, variation, evidence, and tradeoffs.

CORE STATS

Distributions, uncertainty, confidence intervals, and interpretation.

A/B TESTING

Connect analysis to real decisions, not just interesting numbers.

FOUNDATION 03

Learn Machine Learning as a **workflow**

Machine Learning is not just picking an algorithm. It is framing the problem, preparing features, training, validating, and explaining tradeoffs.



Define the prediction target and baseline.



Prepare features without leaking future information.



Choose metrics that match the real decision.



Evaluate honestly before trusting the model.

LAYER ON GENAI

Now use AI as a **force multiplier**

GenAI is another tool in the toolkit. The real skill is knowing when to use it, when not to, and how to check the output.

DEEP LEARNING

Neural networks,
embeddings,
computer vision,
NLP basics.

GENAI + LLMS

Prompting, RAG,
evaluation, limits,
practical use cases.

AWS + CLOUD

Storage, compute,
deployment, APIs,
production
awareness.

DATA SCIENCE INFINITY

DATA SCIENTIST 2.0

The winners combine **AI fluency** with fundamentals

The goal is not to compete with AI. It is to use AI while understanding data, models, decisions, and business context better than the tool does.

LAYER ON TOP

GenAI + AI Fluency

FOUNDATION

Machine Learning + Deep Learning

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AWS + Cloud + Deployment

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SQL + Data
Foundations

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Python + Data
Cleaning

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Statistics + A/B
Testing

PROOF

Tableau + Storytelling

PROOF

Projects + Interviews

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