Cultural Daily

Independent Voices, New Perspectives

Do You Need an AI Degree? A Senior Data Scientist on What Actually Matters

Husayn El Sharif · Wednesday, November 11th, 2026

How I Got Into AI/ML, and What My Degree Did for Me

Starting With a Civil Engineering Thesis

I first got into AI/ML while working on my master's thesis in civil engineering at Florida Atlantic University (around 2011). Back then, the work I was doing was not really called "machine learning" or "artificial intelligence," but I was performing the same tasks as machine learning engineers in building and evaluating a collection of ML models to make predictions.

Because this was part of seeking my master's degree, having a bachelor's degree (also in civil engineering) was essential.

What My Degrees Gave Me

Having a degree, and more importantly, doing well with the classwork and study that go along with it, was vital. That effort (which the degree represents) gave me the mathematical background (advanced math, linear algebra, calculus, and statistics) and the subject matter expertise (in civil/environmental engineering) to understand not only how to build and deploy ML models, but to understand how they work under the hood, their capabilities and their limitations.

I think having a STEM foundation is essential, and pursuing the bachelor's and master's degree in civil engineering facilitated that. So for me, the degree played a large role in both introducing me to the AI/ML field and helping me excel in it thereafter.

Is an AI Degree Worth It, or Is CS, Math, or Stats a Better Foundation?

From what I've seen of AI degrees nowadays, even those advertised by well-respected universities, I do not think an AI degree is "worth it." Rather, it is the STEM foundation (more specifically linear algebra, probability and statistics, calculus, computer science) that is essential as a foundation.

Why Tools Go Out of Date

What I've seen advertised in AI degrees is a focus on mastering specific tools, software packages, or methods that quickly become obsolete. The AI field is changing and evolving so fast that

someone who graduates from an AI program that focuses on tools instead of foundations will find their skill set irrelevant by the time they graduate.

LinkedIn expects the skills needed for jobs to change by at least 65% by 2030, driven by AI, according to its Global Talent Trends report.

Tools change, but the CS, math, algebra, and stats behind them do not. With a good STEM foundation, a graduate will be able to adapt to the new and unexpected advances being made in AI.

My Verdict on AI Degrees

So unless an AI degree program focuses on that foundation, an AI degree is not worth seeking in my view. If you're currently **comparing AI bachelor's programs**, look at how much of the coursework is math, statistics, and computer science versus training on specific tools.

What Did I Have to Learn on the Job That School Didn't Teach?

In a word, everything! AI/ML in a production environment is totally different from what is taught in university textbooks. On the job, the textbook knowledge is converted into real-world impact (and hopefully an improved bottom line for the business).

Getting models into production is hard even for experienced teams. In a Gartner survey of 699 organizations, just 54% of AI projects made it from pilot to production.

Learning Company-Specific Tools

On the job, you need to be an expert (or learn quickly) in the specific tools and systems that the business uses, and those systems are often tailored to the unique mission and tasks of that business. It would not be practical for a school to teach these kinds of intricacies, as every business is different.

For example, for the jobs I've used AI/ML with, I had to learn AWS (Amazon Web Services), how to set up a data processing pipeline using company-specific products and technologies, and how to build and debug AI/ML models that are likewise tailored to that specific business.

Schooling taught me broad principles to apply, and structured learning also builds the discipline and focus needed to do well in any intense job setting. But it does not teach the details of how to use and implement AI/ML in a specific business to meet that business's specific goals.

Learning by Doing

Furthermore, I'm a big proponent of "learn by doing," so there have been cases where I may have learned something in school, only to forget it (because it wasn't put into regular practice) until I came across a new job that actually needed that skill. In those cases, the job would help me refresh what I learned in school and also help the skill stick with me, as opposed to forgetting it.

Photo: Artem Podrez via Pexels

CLICK HERE TO DONATE IN SUPPORT OF OUR NONPROFIT COVERAGE OF ARTS AND CULTURE

This entry was posted on Wednesday, November 11th, 2026 at 9:48 am and is filed under Check This Out
You can follow any responses to this entry through the Comments (RSS) feed. You can leave a response, or trackback from your own site.