

# ARTIFICIAL INTELLIGENCE/DEEP LEARNING ENGINEER

## Degree required

Master's or PhD in a STEM field

## Average starting salary

\$80,000



## THE JOB

### Key job characteristics

Time management, working independently, problem-solving.

### Most rewarding part of the job

Discovering previously unknown insights buried in data.

### Most challenging part of the job

Working with data of varying degrees of reliability, quality, and structure.

## MISCONCEPTIONS

### About artificial intelligence/deep learning engineers

That you are trying to automate people out of jobs or make every decision imaginable. Truth is, AI engineers are building systems that spot hidden patterns and allow humans to decide what to do about them.

## THE SKILLS

### Important soft skills

Communication—especially how to describe complex analyses simply, listening because you need to listen to your business partners or subject matter experts carefully to understand the project goals, and time management.

### Important lab or hard skills

Computer programming (Python, R, C), advanced mathematics, and statistics.

## SOME TIPS

### Advice for high school students

Have a direction in mind that you think you'll be successful in, but always be open-minded about how many different ways you can get there.

### Helpful courses to take in high school or college

Calculus, linear algebra, computer programming.



# A DAY IN THE LIFE: ARTIFICIAL INTELLIGENCE/DEEP LEARNING ENGINEER

A typical day for a machine learning engineer is going to be quite variable depending on where you are working or which phase of a project you are in. Here is a brief look at the typical day for a machine learning engineer building models to predict outcomes.



Review results from overnight testing and analysis and write a summary for the project stakeholders



Create visuals of your results, like charts and tables, that support your interpretation of the analysis and explain any new insights discovered in the data



Update project stakeholders on progress, and discuss challenges or limitations and define a path to overcome them



Contact subject matter experts (SMEs)—these discussions help contextualize data, which is essential to understanding the results and their impact



Investigate questions that arose during meetings with stakeholders and SMEs and summarize findings in emails, then follow-up on any leads or new ideas



Connect with teammates and colleagues working on other machine learning or data science projects to share different perspectives and approaches to problem-solving



Develop new hypotheses and identify what data or information you need to answer them



Set up overnight model testing or analyses to test a specific hypothesis or new approach

## Reflection questions

- What is something new you learned about this career?
- How does this job work with the other careers in genomics you have learned about?
- How can you use this career insight to help you explore your own passion?
- If you could talk to someone with this job, what would you ask them?
- Is there anyone in your personal network you could connect with to learn more?

Learn more about exciting careers in genomics by visiting [illumina.com/stem](https://illumina.com/stem).