# AI vs. ML vs. DL works: Is There a Difference?

**Working in AI is not the same as being an ML or DL engineer. Here's how you can tell those careers apart and decide which one is the right call for you.**

## What Does an AI Engineer Do?

An AI Engineer is a professional who designs, develops, and implements artificial intelligence (AI) systems and solutions. Here are some of the key responsibilities and tasks of an AI Engineer:

- Design and development of AI algorithms: AI Engineers design, develop, and implement AI algorithms, such as decision trees, random forests, and neural networks, to solve specific problems.
- Data analysis: AI Engineers analyze and interpret data, using statistical and mathematical techniques, to identify patterns and relationships that can be used to train AI models.
- Model training and evaluation: AI Engineers train AI models on large datasets, evaluate their performance, and adjust the parameters of the algorithms to improve accuracy.
- Deployment and maintenance: AI Engineers deploy AI models into production environments and maintain and update them over time.
- Collaboration with stakeholders: AI Engineers work closely with stakeholders, including data scientists, software engineers, and business leaders, to understand their requirements and ensure that the AI solutions meet their needs.

- **Research and innovation: AI Engineers stay current with the latest advancements in AI and contribute to the research and development of new AI techniques and algorithms.**
- **Communication: AI Engineers communicate the results of their work, including the performance of AI models and their impact on business outcomes, to stakeholders.**

**An AI Engineer must have a strong background in computer science, mathematics, and statistics, as well as experience in developing AI algorithms and solutions. They should also be familiar with programming languages, such as Python and R.**

## What Does a Machine Learning Engineer Do?

**A Machine Learning Engineer is a professional who designs, develops, and implements machine learning (ML) systems and solutions. Here are some of the key responsibilities and tasks of a Machine Learning Engineer:**

- **Design and development of ML algorithms: Machine Learning Engineers design, develop, and implement ML algorithms, such as decision trees, random forests, and neural networks, to solve specific problems.**
- **Data analysis: Machine Learning Engineers analyze and interpret data, using statistical and mathematical techniques, to identify patterns and relationships that can be used to train ML models.**

- **Model training and evaluation: Machine Learning Engineers train ML models on large datasets, evaluate their performance, and adjust the parameters of the algorithms to improve accuracy.**
- **Deployment and maintenance: Machine Learning Engineers deploy ML models into production environments and maintain and update them over time.**
- **Collaboration with stakeholders: Machine Learning Engineers work closely with stakeholders, including data scientists, software engineers, and business leaders, to understand their requirements and ensure that the ML solutions meet their needs.**
- **Research and innovation: Machine Learning Engineers stay current with the latest advancements in ML and contribute to the research and development of new ML techniques and algorithms.**
- **Communication: Machine Learning Engineers communicate the results of their work, including the performance of ML models and their impact on business outcomes, to stakeholders.**

**A Machine Learning Engineer must have a strong background in computer science, mathematics, and statistics, as well as experience in developing ML algorithms and solutions. They should also be familiar with programming languages, such as Python and R, and have experience working with ML frameworks and tools.**

## What Does a Deep Learning Engineer Do?

**A Deep Learning Engineer is a professional who designs, develops, and implements deep learning (DL) systems and solutions. Here are some of the key responsibilities and tasks of a Deep Learning Engineer:**

- **Design and development of DL algorithms: Deep Learning Engineers design, develop, and implement deep neural networks and other DL algorithms to solve specific problems.**
- **Data analysis: Deep Learning Engineers analyze and interpret large datasets, using statistical and mathematical techniques, to identify patterns and relationships that can be used to train DL models.**
- **Model training and evaluation: Deep Learning Engineers train DL models on massive datasets, evaluate their performance, and adjust the parameters of the algorithms to improve accuracy.**
- **Deployment and maintenance: Deep Learning Engineers deploy DL models into production environments and maintain and update them over time.**
- **Collaboration with stakeholders: Deep Learning Engineers work closely with stakeholders, including data scientists, software engineers, and business leaders, to understand their requirements and ensure that the DL solutions meet their needs.**
- **Research and innovation: Deep Learning Engineers stay current with the latest advancements in DL and contribute to the research and development of new DL techniques and algorithms.**

- **Communication: Deep Learning Engineers communicate the results of their work, including the performance of DL models and their impact on business outcomes, to stakeholders.**