The Career of a Machine Learning Developer

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Abstract

When discussing the jobs that computer scientists can pursue, one of the newest positions is that of the machine learning developer. This position is mostly about working with other organizations to implement and maintain machine learning systems for new problems and for creating efficiency in the system. Machine learning also has been shows to replace a large number of human applications, potentially paving the way for a technological revolution in the job force. With the rapid development and changes that we see in the world today, the machine learning developer’s job could be considered a keystone to the future.

Keywords: Machine Learning Career, Software Development

The Career of a Machine Learning Developer

The technological revolution that has occurred in the past 20 years has take consumers all the way from car mounted phones to machine learning algorithms that aid in space travel. Machine learning is a very new topic among the computer science community, and it is important to take note of the position’s inner workings since this technology could be providing people with the capabilities to usher in a new dawn of technology.

# Job Description

## Description

Machine learning developers build software applications that utilize machine learning principles. Through a complex mural of computer science and mathematics, machine learning was made as a way to intrinsically replicate the processes that the human mind runs. Though this may sound like a easy way to create rouge artificial intelligence, like in the movie *Terminator*, it is better to picture a machine learning developer as a specific member of a project team of software developers.

## Typical Job Tasks of a Machine Learning Developer

### **Create machine learning systems**

The machine learning development process typically begins with introducing problems that humans find difficult to solve and allowing machines to accomplish the task. Machine learning makes this process easier to adapt to human problems.

### **Use machine learning as a way to maximize efficiency**

This process is when a machine learning developer is brought onto a development team and this team works with typically non-machine learning software. The process essentially removes most of the human needs from the original programs and allows for a dramatic and rapid increase in productivity.

## Typical Job Advertisements

### **Staff Machine Learning Engineer**

https://www.linkedin.com/jobs/view/staff-machine-learning-engineer-at-opendoor-3392004186?utm\_campaign=google\_jobs\_apply&utm\_source=google\_jobs\_apply&utm\_medium=organic

### **Applied Artificial Intelligence and Machine Learning Developer**

https://www.linkedin.com/jobs/view/applied-artificial-intelligence-and-machine-learning-developer-at-deloitte-3381844141?utm\_campaign=google\_jobs\_apply&utm\_source=google\_jobs\_apply&utm\_medium=organic

# Career Possibilities

## Salary Range

The salaries for machine learning developers/engineers range from around $80,000 per year to $150,000 per year. Most of this variance comes from the types of companies that need machine learning in their systems.

## Types of Industries

### **Robotics**

The robotics industry is one of the most impacted industries since the industry depends on the implementation of human-like systems.

### **Automotive**

We see the emergence of machine learning technologies today from companies that implement lane correction. This is usually done through machine learning software.

### **Manufacturing**

The Manufacturing industry also has a lot to gain from the application of machine learning. The speed of systems and the ability of those systems to recognize changes needed and process management.

## Geographic Locations

### **Anywhere with Internet**

Just like software development, machine learning development can be accomplished remotely. Due to global issues like COVID-19, the technology community was quick to adopt the world of working from home, and this does not exclude machine learning developers.

# Preparation

## Training

The training for ML development comes typically from experience on the job for software development projects and from the specific education in the field.

## Education

The education for machine learning development is tricky since there are a wide variety of companies that have a wide range of needs. This means that machine learning for your local factory is completely different from machine learning for Google. From job postings, ML software engineers typically need to have a bachelors degree in computer science or a related field.

## Work Experience

Most entry level positions for machine learning have a requirement that the individual has been working in a software engineering team or have attained a master’s level education. This is hard to do because machine learning is such a new position that there are scarce jobs that have machine learning training. This typically means that most new hires are coming from a research background or have been in the field already.

# Fulfillment of Giftings (SWOT Analysis)

## Giftings

I have always been interested in how the brain works and this lead me to pursue a career in neurosurgery, but for one reason or another, I decided that this wasn’t the path and reason that God put me on the earth. I now use my knowledge and skills with the brain and hope to apply them with machine learning.

## Professional Need Analysis

This profession needs the kind of person who can look at details about a situation and look at the big picture. Machine learning developers are usually very good at working with others and should be able to build very complex systems.

## Gifting Gap Analysis

I think that one of my shortfalls with this career is that I’m very unsure of what I want from my career, so I don’t want to start working in machine learning and then end up hating it. I pray every week that God will give me discernment for what I need to do to best serve him.

I think that I should work on finding a good job where I can start my software development career. Before I begin working with machine learning, it is important that I am accustomed to the software development process as well.

## Kingdom Mission

This career would help build the Kingdom of God by allowing for advancements and development which will make people’s life’s easier. There is potential for some amazing creations to come from machine learning. Machines can help people with disabilities drive, or help by recognizing when a person has a heart attack. Though technology doesn’t always seem like a good thing to further God’s Kingdom, it is important to realize the improvements to peoples lives that machine learning and technology as a whole can provide for people.

# Conclusion

The job of a machine learning developer has a lot of potential to be a very pivotal part of the next generations of industry. Through this essay we have learned the relative ease that this position has and how this position will most likely become a common position in the software development realm.

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