JOB 8: AI and ML Research Engineer

Job Overview

An AI and ML Research Engineer is responsible for designing, developing, and optimizing machine learning models and AI systems. They work with large datasets, implement deep learning algorithms, and research innovative techniques to improve AI applications.

Required Skills for AI and ML research engineer

1. TensorFlow
2. PyTorch
3. Python
4. NumPy
5. Pandas
6. Scikit-learn

Skills Information:

7. **TensorFlow** – An open-source framework for building deep learning models and neural networks.
8. **PyTorch** – A deep learning framework with dynamic computation graphs for research and production.
9. **Python** – A versatile programming language widely used for AI, ML, and data science.
10. **NumPy** – A numerical computing library for handling arrays, mathematical functions, and linear algebra.
11. **Pandas** – A data manipulation library for preprocessing and analyzing structured data.
12. **Scikit-learn** – A machine learning library for implementing algorithms like regression, clustering, and classification.

Skill Learning Resources

- **TensorFlow:** TensorFlow Official Documentation, Deep Learning Specialization (Coursera), TensorFlow for Deep Learning (Book)
- **PyTorch:** PyTorch Official Documentation, Fast.ai Course, Deep Learning with PyTorch (Book)
- **Python:** Python.org Tutorials, Automate the Boring Stuff with Python (Book), Real Python
- **NumPy:** NumPy User Guide, Python Data Science Handbook (Book)
- **Pandas:** Pandas Official Documentation, Data Science Handbook (Book), Kaggle Pandas Courses
- **Scikit-learn:** Scikit-learn Documentation, Hands-On Machine Learning with Scikit-Learn (Book), Machine Learning Mastery

Difficulty Level

Advanced – Requires strong mathematical foundations, hands-on experience with deep learning models, and knowledge of AI frameworks.