Machine Learning Engineer - Job Description

About DataKlout

DataKlout ("Every Call is a Business Opportunity") is an AI and cognitive solution designed to understand human voice and speech-based conversations. It provides insights and analyses for individual conversations and trends across aggregated conversations. Delivering actionable and consumable insights is a game changer. Our flagship product has paved the way for the next generation of solutions built on a cognitive and artificial intelligence platform. Join us to lead, learn, and grow your career while contributing to building something truly remarkable.

Role Overview

We are seeking highly skilled professionals with a background in statistics, linguistics, and computer science engineering. Candidates with expertise in Python programming, natural language processing (NLP), or speech processing will be given preference. You will play a critical role in developing advanced AI models, working with large datasets, and deploying production-grade machine learning systems.A minimum of 3+ years of experience is required for this role.

Responsibilities:

Model Development:

- Design and implement Deep Learning models, including RNNs, CNNs, Transformers, and DNNs, for NLP and speech recognition applications.
- Develop and optimize Hidden Markov Models (HMMs) and other statistical frameworks for speech processing.
- Explore and integrate state-of-the-art techniques in NLP and speech processing.

Data Preparation:

- Preprocess and clean large text and speech datasets for model training.
- Conduct exploratory data analysis (EDA) to identify trends and patterns.

Optimization and Deployment:

- Optimize model inference times for real-time applications.
- Deploy ASR (Automatic Speech Recognition) and NLP models into production environments using APIs or cloud platforms.
- Ensure scalability and reliability of deep learning products.

Collaboration & Reporting:

- Present results and insights clearly to cross-functional teams for collaborative problem-solving.
- Document model design, development, and deployment processes to ensure reproducibility.
- Collaborate with data scientists, engineers, and product managers in an agile environment.

Research & Innovation:

- Apply computational mathematics concepts in developing innovative solutions.
- Publish white papers, technical reports, or patents based on R&D outcomes.

Required Technical Skills:

- **Programming:** Advanced proficiency in Python (NumPy, TensorFlow, PyTorch, etc.).
- **ASR Frameworks:** Experience with tools like Vosk, Kaldi, and DeepSpeech.
- **NLP Libraries:** Proficiency in libraries such as spaCy, NLTK, Hugging Face Transformers, BERT, etc.
- **Deep Learning:** Expertise in frameworks like TensorFlow and PyTorch for building RNNs, CNNs, and Transformer models.
- **Data Analysis:** Strong skills in Jupyter Notebook, NumPy, Pandas, and Matplotlib.
- **Cloud Platforms:** Experience deploying solutions on Azure, Oracle Cloud, or Google Cloud Platform.
- **Lifecycle Mastery:** Comprehensive knowledge of the ML lifecycle, from data preparation to model deployment.

Desired Skills:

- **Speech Processing:** Strong background in ASR and linguistics.
- **Mathematical Expertise:** Proficiency in multivariate statistical models and computational methods.
- **Agile Practices:** Familiarity with agile development methodologies and tools.
- **Model Explainability:** Experience with interpretability and explainability of machine learning models.

Soft Skills:

- Excellent verbal, written, and presentation skills.
- Strong problem-solving and decision-making abilities.
- Self-motivated and adaptable to a fast-paced environment.
- Team-oriented with excellent interpersonal skills.
- Ability to communicate effectively with clients and deliver results independently.

Educational Qualifications:

- Bachelor's or Master’s degree in Computer Science, Statistics, Mathematics, or related fields.
- A Ph.D. in a relevant domain is a plus.