

WinterLight Labs Inc

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Seeking: Machine Learning Engineer

WinterLight Labs is a Toronto-based company which has developed cutting-edge software for objectively measuring cognitive impairment by automatically quantifying hundreds of aspects of speech and language using natural language processing algorithms and machine learning.

We are seeking a Machine Learning Engineer to specialize in the development of automatic speech recognition (ASR) and machine learning (ML) models. This role may involve:

- In-house implementation of state-of-the-art ASR models, using deep neural networks and open-source tools, such as Kaldi.
- Research and development of methods for online re-training and adaptation of ASR models, especially for individuals with speech disorders (e.g., aphasia) and elderly voices
- Analysis of the robustness of lexico-syntactic features derived from errorful ASR transcripts.
- Implementation of additional lexico-syntactic, semantic, and pragmatic features derived from textual transcripts
- Implementation of additional acoustic features derived from the speech signal
- Optimization of feature selection and dimensionality reduction techniques
- Optimization of model hyperparameters, and experimentation with a variety of model types.
- Optimization of multi-view approaches to data fusion
- Leveraging unsupervised and supervised approaches to data fusion

What you'll need:

- Graduate degree in Computer Science, Computer Engineering, or an equivalent degree.
- 5+ years research experience in machine learning, especially in computational linguistics.
- Research experience in, or demonstrable familiarity with, standard ASR architectures.
- Research experience in, or demonstrable familiarity with, standard feature toolkits in computational linguistics, such as NLTK, CoreNLP, gensim, or Spacy.
- Research experience in, or demonstrable familiarity with, modern approaches to deep learning.

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