

# Amirmehdi Sharifzad

SOFTWARE DEVELOPER · DATA SCIENTIST

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## Skills

**Programming** Proficient in Python, Scala and SQL familiar with R, C++ and JavaScript

**Libraries/Tools** Spark, TensorFlow, PyTorch, Scikit-learn, SciPy, NLTK, Tableau

## Work Experience

### Scribd Inc.

San Francisco, CA, USA

DATA SCIENTIST

Sep 2019 - Dec 2019

- Worked on an end to end machine learning project in **Scala** to predict query specificity which improved search success by **20%**
- Implemented FuzzyWuzzy (Edit distance) string matching algorithms in Scala for feature generation
- Used **Spark ML** and **XGBoost** to implement a Gradient Boosting Regression model and prediction pipeline
- Implemented Fast KNN algorithm to approximate KNN graphs which reduced feature generation runtime by **60%**
- Created a **Tableau** dashboard to study the queries with low success and find solutions to improve the search experience

### MindBeacon Software Inc.

Toronto, ON, Canada

DATA SCIENTIST

Jan 2019 - Apr 2019

- Implemented **NLP** techniques such as *NER*, *Stemming*, *TF-IDF* and *word embeddings* to preprocess and vectorize text data
- Implemented **Clustering** algorithms (*K-Means* with *latent semantic analysis* and *Gaussian Mixture Models*) using **Scikit-learn** in order to retrieve information from text and detect topics
- Developed a QnA bot using **Azure** and **Node.js** which automates response to over **20%** of client's emails accurately
- Used **PyTorch** to implement a **Sequence Model** with **Attention Mechanism** and **LSTM cells** to suggest responses to client emails which automates another **30%** of the emails

### PerkinElmer, Innovation Outpost

Kitchener, ON, Canada

SOFTWARE DEVELOPER (ML STREAM)

May 2018 - Aug 2018

- Developed a **Deep Neural Network** to automate predicting clinical outcomes and survival analysis from large scale cancer genomic profiles using **TensorFlow**
- Implemented **multi GPU processing** with cross validation for hyperparameter optimization and training, which reduced the run time **60 fold** from the original implementation

### University of Waterloo, Department of Statistics

Waterloo, ON, Canada

PART-TIME RESEARCH ASSISTANT

Jan 2018 - Apr 2018

- Researched **Deep Learning** techniques for **Farsi Language Context Resolution** in chat-bots
- Applied **Named-Entity Recognition** and **Part-Of-Speech tagging** on Farsi corpora using **NLTK**
- Implemented **CNN** and **seq2seq** models using **numpy** and **TensorFlow**

## Certificates

Neural Networks and Deep Learning by deeplearning.ai on Coursera 🌐

March 2019

Convolutional Neural Networks by deeplearning.ai on Coursera 🌐

May 2019

## Education

University of Waterloo

Excellent Standing

HONOURS BACHELOR OF COMPUTER SCIENCE (BCS)

Sep. 2016 - Exp. Apr. 2021