Fanchi Meng

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`https://fanchi.github.io/`

Summary

Strong computer science fundamentals in data structures and algorithms.
Hands on experience in machine learning, deep learning and data analysis.
Hands on experience in big data with Hadoop.
Proficiency in Java, Python and Matlab.

Experience

- January 2014 to December 2018: **Research assistant**, Department of Electrical and Computer Engineering, University of Alberta, Canada.
  - Responsible for developing and deploying machine learning based methods to predict functions for biology data (structured data).
  - Responsible for retrieving and analysing data from large public databases and searching for patterns between these data and certain diseases.
- September 2010 to June 2013: **Teaching assistant**, College of Information Engineering, Northwest A&F University, China.
  - Responsible for instructing lab sessions, reviewing assignments and exams for data structure course.
- June 2010 to October 2010: **Software developer intern**, DMRC lab, Northwest A&F University, China.
  - Responsible for developing windows client for a video conference system.

Selected Projects

- **[Computer Vision] Plant seeding classification**
  - Determine a plant's species from a photo.
  - Multiclass classification.
  - `Machine learning model` Convolutional Neural Network
  - `Framework` Keras with tensorflow backend
- **[Structured Data Prediction] DMRpred**
  - Predicts an important function for protein data.
  - Binary classification.
  - Trained on structured data with extensive feature engineering.
  - Will appear in high impact journal.
  - `Machine learning model` Random Forest
  - `Web server` http://biomine.cs.vcu.edu/servers/DMRpred
  - `Back end implementation` Java + MySQL
- **[Big Data] Recommender system**
  - Movie recommender system running on Hadoop.
  - Based on item-item Collaborative Filtering (item CF).
  - Five chained MapReduce jobs.
  - `Project page` https://github.com/fanchi/RecommenderItemCF
- *A full list of my projects and publications can be found at https://fanchi.github.io/*

Skills

- **Programming languages:** Java, Python, Matlab.
- **Machine learning models:** Logistic Regression, Naive Bayes, Random Forest, (Deep) Neural Network, Convolutional Neural Network.
- **Machine learning applications:** data acquisition, data cleaning, feature engineering, feature selection, hyperparameter tuning, model evaluation, statistic analysis.
- **Machine learning/Data mining tools:** scikit-learn, Tensorflow, Keras, Weka.
- **Big data:** Hadoop Map-Reduce.
- **Database:** SQL.
- **Operating System:** Linux shell/GUI.
- **Version control/workflow:** Git.

Education

January 2014 to December 2018: **PhD in Software Engineering & Intelligent Systems**,
Department of Electrical and Computer Engineering, University of Alberta, Canada.
September 2006 to June 2013: **Bachelor & Master in Computer Science and Technology**,
College of Information Engineering, Northwest A&F University ("Project 985" top university), China.