Sitong Li

Edmonton, AB

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Skills & Others

Programming Languages: Java, Python, XML, Matlab, R, JSON, SQL

Tools: Android Development, AWS, MongoDB, Kibana, SPSS, Adode Illustrator

Courses: Algorithm Design and Analysis (Java), Readings in Algorithm, Internet Algorithmics (Java/ Distributed Algorithm), Introduction to Data Science (Python), Unstructured Data (Python), Advanced Artificial Intelligence, Machine Learning

Mathematics: Probability, Linear Algebra, Calculus, Statistics, Stochastic Process

Interest: Algorithm and problem-solving

Education

Western University, *London, ON*
M.Sc. Computer Science (GPA: 4.00 / 4.00)   *Sep. 2018 – Sep. 2019*

University of Science and Technology of China (USTC), *Hefei, China*
B.Sc. Life Science   *Aug. 2008 – Jul. 2012*

Project Experience

A Study on Deep Convolution Neural Networks for Salient Object Detection   **Supervisor: Charles Ling**
View link to see the report   *May. 2019 – Jun. 2019*

- An introduction of visual saliency related topics with special emphasis on how SOD is related to other computer vision problems.
- A comprehensive review of how deep neural networks evolved for image classification and the development of fully convolutional neural networks for SOD problem.
- An empirical study of the most recent best-performing neural net for SOD- BASNet, including reproducing the experiments and an application of FOCAL loss in BASNet.

Titanic: Machine Learning from Disaster
View this on Kaggle   *Feb. 2019 – Feb. 2019*

- Implementation of data cleaning, visualization, model selection and ensembling.
- Top 7% out of all participants.

A Review on Recent Advances in N-linked Glycoproteomics   **Supervisor: Kaizhong Zhang**
View link to see the review   *Jul. 2019 – Aug. 2019*

- Introduction of background knowledge, including biological significance of glycosyslation, and two major types of glycosylation.
- An overview of previous approaches and main challenges in glycoproteomics.
- An in-depth survey of recent advances in glycoproteomics, which are divided into different domains, including fragmentation strategies, glycopeptide-spectrum matching algorithms, false discovery rate (FDR) estimation, etc..
- A chapter introducing glycoproteomics research involving machine learning algorithms.

Tree Alignment: Algorithms and Applications   **Supervisor: Kaizhong Zhang**
View link to see the review   *Nov. 2018 – Dec. 2018*

- Introduction of an widely used measurement of similarity between trees: tree alignment. The classical Jiang-Wang-Zhang's Algorithm and a derived algorithm between similar ordered tree are analyzed.
- Introduction of applications of tree alignment algorithms, including comparison of RNA secondary structures and extraction of fields from HTML search results.

Twitter Sentiment Analysis   *Dec. 2018 – Oct. 2018*

- Implementation of various preprocessing strategies to get more "clean" tweets.
- Extracting features (tf-idf) from cleaned tweets.
- Application of Word2vec to generate word vectors.
- Implementation of various machine learning models, including SVM, random forest, naive bayes.

Working Experience

Teaching Assistant of Information Systems and Design, *Western University*
Task includes giving interactive lectures in class.   *Sep. 2018 – Apr. 2019*

Research Assistant in Neuroscience, *USTC*
Play a leadership role in several research projects.
Obtain Kwang-Hua Scholarship.   *Sep. 2012 – Jun. 2018*

Teaching Assistant of Physiology and Neurobiology Experiment, *USTC*
Task includes practical demonstration of physiological experiments in class.   *Sep. 2013 – Feb. 2014*