Sitong Li

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Skills & Others

Programming: Python, Java, JavaScript, XML, XSD, SQL, JSON, HTML, CSS

Tools: Microsoft Office, SPSS, Django, Android Studio, AWS, MongoDB, Kibana

Courses: Algorithm Design and Analysis (Java), Readings in Algorithm, Internet Algorithmics (Java / Distributed Algorithm), Introduction to Data Science (Python), Unstructured Data (Python), AWS Essentials, 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 – Nov. 2019*
University of Science and Technology of China (USTC), Hefei, China	B.Sc. Life Science	*Aug. 2008 – Jul. 2012*

Project Experience

Multiple Web Applications Development using Python Django Framework   *. Current – Dec. 2019*
- Build several web apps from scratch: website wireframe, relational database design, implementation, and optimization.
- Finish web apps- including poll, forum, questionnaire, etc. - that support admin, user authentication, customized forms, various views, and automated tests.

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*
- Background introduction of glycoproteomics and an overview of existed approaches and main challenges.
- 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 clean data, feature engineering, and various machine learning models, including SVM, random forest, naive bayes.

Working Experience

Volunteering Research Assistant, Computational Psychiatry   *Feb. 2020 – Dec. 2019*
- Data cleaning, feature engineering on real life electronic health records.
- Developing machine learning algorithms to do predictions on mental disease, ages, etc..

Software Engineering, HealthGauge   *Sep. 2019 – Oct. 2019*
- Wearable device application development and testing.
- Algorithm development for ECG and PPG signal alignment.

Teaching Assistant of Information Systems and Design, Western University   *Sep. 2018 – Apr. 2019*
- Giving interactive lectures on database management in class, assignment consulting and marking.

Research Assistant in Neuroscience, USTC   *Sep. 2012 – Jun. 2018*
- Play a leadership role in several research projects on visual system development.

- Be Involved into experimental design, data analysis, thesis reviewing, etc..
- Obtain Kwang-Hua Scholarship.

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