LINLIN(KAREN) YU

http://yulinlin0828.github.io ⋄ yulinlin0828@gmail.com

EDUCATION

Shanghai Jiao Tong University (SJTU)　　　　　　　　　　Sept. 2015 - June 2019(expected)
B.S. in Information Security, *School of Electronic Information and Electrical Engineering*
Overall GPA: 85.47/100
Major GPA:86.32/100

RESEARCH INTERESTS

Natural Language Processing　　Machine Translation,Natural Language Understanding and so on
Data Science　　　　　　　　　　Data Mining and Information Retrieval
Computer Vision

RESEARCH

The Improvement Work of Chinese Segmentation Model　　　　May 2018 - Present
BCMI-NLP lab in SJTU　　　　　　　　　　　　　　　　　*Advisor: Prof.Hai Zhao*

· Reproduced the work that Modeling Named Entity Embedding Distribution into Hyper-sphere and applied it to the NER(named entity recognition)
· Analyzing different segmentation rules of open corpus and the cause and types of error when training and testing in different corpus excluding the error when training and testing in the same domain
· I am doing some work about building a universal Chinese word segmentation and adding some rules to the segmentation results to meet different segmentation rules. At the same time I will use NER and semantic analysis to improve the accuracy of the neural word segmentation

Alias Method and MH based Acceleration Algorithm　　　　July 2016 - May 2017
for Biterm Topic Model　　　　　　　　　　　　　　　　*Advisor: Dr.Xingwei He*

· Implemented Biterm Topic Model (BTM) using java code as baseline and proposed FastBTM model which is based on Metropolis - Hastings and alias method
· Carried some experiments of our new algorithm on three different datasets including two short text datasets and one long document dataset and we compared the convergence speed of our FastBTM with BTM
· Fast BTM successfully reduces sampling complexity of BTM from $O(K)$ to $O(1)$ (K denotes the number of topics) and the FastBTM is effective for reducing the sampling time of both short text and long text datasets

Optimization of Blockchain Confidential Transaction Algorithm.　　Sept. 2017 - Mar. 2018
Participation in Research Program in SJTU　　　　　　　　*Advisor: Prof.Xuejia Lai*

· Read some documents and papers about confidential transaction and researched the core technology including the Pedersen commitment using the math knowledge of Elliptic curve and homomorphic encryption
· Improved the operation efficiency and performance of the algorithm by optimizing the Borromean Range Signature in storage space and Range Proof algorithm in time by 5% in the confidential transaction
· Set up a network using Hyper Fabric platform to realize some Blockchain services such as transaction and query

SELECTED PROJECTS

Prediction of Adolescent Bone Age by Hand X-rays

Course project in Introduction to AI

Oct.2018

Professor: Shilin Wang

- Used Keras to build a attention-based deep learning network to do the regression work on prediction of bone age
- Combined the image input and auxiliary age information to improve the model and used VGG-16 to pre-train our model
- Carried several experiments to explore the influence of convolution kernel, neuron scale from two inputs and data balance to both the rate of convergence and accuracy.

Other programming projects

- House Price Forecasting Model in Shanghai: Used Scrapy Framework to get more than 70,000 pieces of house information and then did Chinese segmentation work and data preprocessing ; Exploited machine learning algorithms including linear-regression, decision Tree ,Random Forest and XGBoost .Adjusted the parameters in the XGBoost model for the best performance
- Software Engineering: Developed a multi-functional calculator in the Android using JAVA and Designed a restaurant management system using C# and SQL database on window PC terminals
- Computer Network: Developed a multi-user chat program with server and client front using Python and Socket.
- Designed and developed a WeChat Official Account about students activities using PHP and MySQL

PUBLICATION

Xingwei He, Hua Xu, Jia Li, Liu He,**Linlin Yu** FastBTM: Reducing the Sampling Time for Biterm Topic Model *Knowledge-Based Systems(KBS), vol. 132, pp. 11-20, 2017. (IF: 4.529)*

HONORS&AWARDS

National Endeavor Fellowship of Shanghai Jiao Tong University for 2016-2017 academic year.

Academic Excellence Scholarship of Shanghai Jiao Tong University for 2015-2016 acdemic year.

SKILLS

Proficiency in programming languages such as C++, Python and familiar with PHP and Java.

Familiar with machine learning algorithms such as LR, Naive Bayes and Random Forest.

Familiar with neural networks such as CNN, RNN, LSTM.

SOCIAL ACTIVITIES

Director of Student union in SJTU

Aug. 2015 - Mar. 2017

- Planned and organized various Debate competitions and DataBang Competitions

Volunteer

Apr.2016 & Oct. 2016

- Volunteered in the Shanghai International Marathon and Shanghai International Half Marathon