Chen Lin

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EDUCATION

Emory University, Atlanta
Doctoral of Science, Computer Science and Informatics (CSI)
Expected August 2023 *CGPA: 3.72/4.00*

Georgia Institute of Technology, *Atlanta*
Master of Science, Bioinformatics
Dec 2017 *CGPA: 3.69/4.00*

Peking University, *Beijing (China)*
Bachelor of Science, Biology
July 2016 *CGPA: 3.61/4.00*

TECHNICAL SKILLS

DL-frameworks : PyTorch, TensorFlow
Languages : Python, R, C, Java, Matlab
Database : MySQL, PostgreSQL
General : Data Structures, Algorithm, Machine Learning

EXPERIENCE

Data Security Engineer Intern **Mar - Aug 2022**
ByteDance Ltd., Mountain View, California
Develop the intelligent system and build an ML-NLP model for email spam detection based on email content.

Data Security Engineer Intern **Mar - Aug 2021**
ByteDance Ltd., Mountain View, California
Build an intelligence system for email spam detection based on email content.

Natural Language Processing (NLP) Engineer **Mar - Aug 2018**
BotBrain AI Co., Ltd., Beijing, China
Develop algorithms to process domain-specific natural language data in Chinese.

Research Scientist Intern **May - Aug 2017**
LOHAS TECH Co., Ltd., Beijing, China
Develop the unobtrusive blood pressure estimation method based on pulse wave signal.

PROJECTS

Graph Neural Network Modeling of Web Search Activity for Real-time Pandemic Forecasting **2021 - 2022**

In this work, we aim to predict the development of disease based on the Web search activity using geographical relations between locations.

- **Contribution:** A novel self-supervised message passing neural network (SMPNN) framework for pandemic forecasting, which achieves more accurate prediction with up to a 6.9% reduction in prediction errors.

Nowcasting air polluting from Web search interest **May 2019 - 2021**

Develop classification models on time series data to nowcast air pollution across 10 major metropolitan areas in the USA.

- **Contribution:** A novel search term Dictionary Learner-Long-Short Term Memory (DL-LSTM) composite model
- **Link :**https://github.com/clin366/airpollutionnowcast

Develop multimodal learning methods for sequential data with missing values. Our results outperform state-of-the-art models on both real-world and synthetic datasets,

which is published as a top-tier conference paper.

- **Contribution:** A novel cross-modal memory fusion network (CMFN) model.
- **Link :**https://github.com/clin366/multi-seq-learning

Neural architectures for Chinese word segmentation **2018**

A neural-based framework which segments Chinese sentences into bag of words with self-defined dictionary for accurate domain-specific word segmentation. The framework is composed by two parts:

- A python-based supervised Bi-LSTM model for Chinese world segmentation trained on People's Daily Corpus.
- A Java-based unsupervised probabilistic model for domain-specific word detection.
- **Link :**https://github.com/clin366/DeepWordSegmentation

RELEVANT COURSES

• Natural Language Processing • Artificial Intelligence • Deep Learning
• Machine Learning • System Programming
• Data Structures and Algorithm • Advanced Database Systems
• Statistics

PUBLICATIONS

• Lin, Chen, Carl Yang, and Eugene Agichtein. "Graph Neural Network Modeling of Web Search Activity for Real-time Pandemic Forecasting." ACM International Conference on Information and Knowledge Management, (under submission).
• Lin, Chen, et al. Detecting Elevated Air Pollution Levels by Monitoring Web Search Queries," Journal of Medical Internet Research, (under review).
• Lin, Chen, Joyce C. Ho, and Eugene Agichtein. "Cross-modal Memory Fusion Network for Multimodal Sequential Learning with Missing Values." European Conference on Information Retrieval. Springer, Cham, 2021.
• Lin, Chen, et al. Pulse Waveform as an indicator of baseline offset in pulse transit time-based blood pressure estimation, Healthcare Innovation Point-Of-Care Technologies Conference (HI-POCT), 2017 IEEE, Bethesda, MD, 2017, pp. 26-31