**Shuo Guan**

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# Education

Email: [shuo.guan@courant.nyu.edu](mailto:shuo.guan@courant.nyu.edu)

**M.S.: New York University** (Courant Institute of Mathematical Sciences) New York, Sep.2019 – Jan.2022

Major: **Computer Science GPA: 3.83**

**B.S.: Tongji University** Shanghai, China, Sep.2015 – Jun.2019

## Major: Computer Science and Technology

Minor: **Applied Mathematics** (Sep.2015 -Feb.2017)

## GPA: 4.41/5.0 Major GPA: 4.71/5.0

Awards: Shanghai Scholarship (2/112); Qidi President Scholarship(1/112) Honors: Outstanding Graduate of Shanghai(6/112)

**Computer Science Skills:** C\C++, Matlab, Python, Java, C#.Net, SQL, Docker, k8s; Windows, Linux;

**Math Skills:** Mathematical analysis, ODE, Complex analysis, Numericalanalysis

**Internship Dell EMC Inc.** Building 6, Chuangzhitiandi, 433 Songhu Road, Shanghai, China; July.2018 *Supervisor: Pengfei Wu, senior research fellow*

* Implemented, and maintained a blockchain platform, and an interacting system based on HyperledgerFabric;
* Had a short research on outlier detection based on CNN and LSTM.

**Credit Suisse** Eleven Madison Avenue, New York, NY, 10012; June 2021-Aug 2021

*Position: Analyst; Manager: Bismayan Chakrabarti, AVP*

* Constructed the interpretability models for an trained isolation forest machine learning model of anomalydetection;
* Designed, trained and designed a phrase extractor and classifier for user-generated texts.

# Research & Project Extract, Select and Rewrite: A New Modular Summarization Method Jan.2021 - Now

*Advisor: He He; Research in NYUCourant*

* Proposed a three-phase modular abstractive summarization based on knowledge triples;
* Constructed the subtask datasets for training content selector and rewriter;
* Fine-tuned multiple pre-trained language models on the subtask datasets;
* The performances are SOTA-competitive on Gigaword, DUC2004 and Reddit-TIFU datasets;
* Achieved good results with the modules trained on sub-sampled datasets and different datasets;

**Knowledge and Keywords Augmented Abstractive Sentence Summarization** Sep.2020 - Jan.2021

* Proposed a novel short text abstractive summarization augmented by knowledge and topic keywords;
* Constructed a special linearized knowledge structure for short texts;
* Utilized tri-encoders structure, tri-copy mechanism and hierarchical attention;
* SOTA-competitive performances on multi-language datasets.

**A New Hybrid Model for Recommendation System based on DNN and RBM** Mar.2019 - June.2019

*Advisor: Jiujun Cheng; Graduation Thesis; Used Tensorflow/Python,Matlab*

* Established and optimized a content-based 7-layer DNN (TextCNN embedded) structure and featureengineering;
* Designed and implemented a new RBM collaborative filtering model, and tried to build DBN modelforrecommend;
* Used 3 methods to combine two models, and proved that the hybrid model had a much better result thanothers.

**An Improved LeNet-5 Gas Identification Structure for ElectronicNoses** Mar.2018 - Sep.2018

*Advisor: Guangfen Wei; Used Tensorflow/Python*

*Sponsored by project of Natural Science Foundation of China (NSFC) (No. 61174007)*

* Built and tested an improved convolutional neural network structure based on LeNet-5 for gas identification of electronic noses;
* Got the result that the final gas identification accuracy rate reaches 99.67% with the optimizedstructure.

**An Optimal Pricing Model of Crowdsourcing Platform** Sep.2017 - June.2018

*Independent Project; Team Leader; Used Matlab,C\C++*

*Project of 2017 Contemporary Undergraduate Mathematical ContestinModeling*

* Built an optimal pricing model for crowdsourcing platform based on multiple cluster algorithms and proportional sharing;
* Got a much better simulation result than the result of traditional pricing model.

# Publications

1. **Shuo Guan**, Vishakh Padmakumar, He He. “Extract, Select and Rewrite: A New Modular Summarization Method” Manuscript (2022).
2. **Shuo Guan**. “Knowledge and Keywords Augmented Abstractive Sentence Summarization.” *EMNLP 2021 Workshop on New Frontiers in Summarization* (2021): 25-32.
3. Guangfen Wei, Gang Li, **Shuo Guan**, Jie Zhao, Xue Sun. “Study on an Improved LeNet-5 Gas Identification Structure for Electronic Noses.” *2018 IEEE SENSORS* (2018): 1-4.
4. **Shuo Guan**. “Analysis of Optimal Pricing Model of Crowdsourcing Platform Based on Cluster and Proportional Sharing.” *2018 6th International Symposium on Computational and Business Intelligence (ISCBI)* (2018): 99-103.