

# Dingrong Wang

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## Education

### Rochester Institute of Technology

*PhD. Student in Computing Information and Science*

2020 Sep. – Present

*Rochester, NY*

### Dalian University of Technology

*Bachelor in Computer Science (Software Engineering)*

2016 Sep. – 2020 Jul.

*Dalian, China*

## Research Experience

### Graduate Research Assistant

09/2020-Present

*Several topics, please refer to publication list for details*

*Rochester, NY*

- Reinforcement learning application to sketch retrieval, recommender system, dense objection detection and ASD patient analysis (time series classification).
- Offline reinforcement learning combining with active or semi-supervised learning, trying to build offline/off-policy reinforcement learning model fine-tuned by few human feedback.
- Lottery Ticket Hypothesis related research.

### Research Assistant

06/2017-07/2017

*Design and Implementation of Content-Based Near-Duplicate Chart Retrieval System*

*Dalian, China*

- Learned to utilize the most popular algorithm of image features extraction, such as perceptual hash algorithm and edge detection histogram algorithm to build algorithm models
- Utilized web crawler techniques to collect pictures and charts as data sources and stored them into the SQL database.
- Designed the software framework, and used a series of frames and tools to realize the connection and coupling with front end, data base and algorithm
- Verified the robustness of algorithm through images transformation, such as stretching, expanding and shrinking, based on Python image processing technology

## Industry Experience

### Machine Learning Engineer Intern

09/2019-03/2020

*Contract comparison project*

*Beijing, China*

- Used Chinese OCR yolo+CRNN model for text detection and scanning
- Image processing algorithms such as connected domain algorithm and sifted algorithm preprocess images
- Used self-defined method to calculate image pixel features, generated a large amount of random data based on the pixel-wise feature vector, and used random forest algorithm and model to classify pixels to judge whether the contract has been changed

### Software Development Engineer Intern

03/2020-07/2020

*Full stack website development and maintenance*

*Beijing, China*

- Front-end website maintenance using JavaScript, CSS and HTML
- Develop back-end machine learning algorithms to analyze data
- Develop queries using SQL within Java to retrieve data from database

## Technical Skill

### Machine Learning

- **Deep Learning Framework:** TensorFlow, PyTorch
- **Machine Learning and Data Analysis Library:** Scikit-learn, Pandas, Matplotlib
- **Object Detection Framework:** Detection2, MM-detection
- **Image Processing:** OpenCV

### Software Programming

- **Language:** C, C++, Java, Python, R, Matlab, Qt, Unix, CUDA, JavaScript
- **Courses:** Data Structure, Parallel Computing, Image Processing

**Coupling Deep Textural and Shape Features for Sketch Recognition. PROCEEDINGS OF THE 28TH ACM INTERNATIONAL CONFERENCE ON MULTIMEDIA**

Qi Jia, Xin Fan, Meiyu Yu, Yuqing Liu, Dingrong Wang, Longin Jan Latecki

**Deep Reinforced Attention Regression for Partial Sketch Based Image Retrieval. PROCEEDINGS OF THE 21TH IEEE INTERNATIONAL CONFERENCE ON DATA MINING**

Dingrong Wang, Hitesh Sapkota, Xumin Liu, Qi Yu

**Deep Temporal Sets with Evidential Reinforced Attentions for Unique Behavioral Pattern Discovery. Submission to ICML 2023**

Dingrong Wang, Deep Shankar Pandey, Qi Yu

**Conservative Evidential Exploration of Long-Term User Interest in Dynamic Recommender Systems. Submission to ICML 2023**

Dingrong Wang, Krishna Prasad Neupane, Qi Yu

**Lottery Ticket Ensemble Hypothesis Towards Calibrated Sparse Network Training. Submission to UAI 2023**

Hitesh Sapkota, Dingrong Wang, Qi Yu

**Adaptive Important Region Selection with Reinforced Hierarchical Searching for Dense Object Detection. Submission to ICCV 2023**

Dingrong Wang, Hitesh Sapkota, Qi Yu