Curriculum Vitae

Basic Information

Name: Jiatong Li

Email: jiatong.li@rutgers.edu

Education Background

09/2018-
PhD
Field: Machine Learning
Department of Computer Science,
Rutgers University—New Brunswick, NJ

08/2016-05/2018
Master of Science in Electrical and Computer Engineering
Track: Signal & Image Processing and Machine Learning
GPA: 4.0/4.0
Department of Electrical Engineering and Computer Science,
University of Michigan, Ann Arbor, MI

09/2012-07/2016
Bachelor of Engineering
Major: Electronic Information Science and Technology
Major GPA: 88.9/100
Department of Electronic Engineering,
Tsinghua University, China

Expertise and Research Experiences

➢ **Expertise**
- Programming languages: Python, Matlab, C++, R
- Deep learning frameworks: Pytorch, Tensorflow

➢ **Predicting Relative Food Ingredient Amounts from Images** (Fall 2018-, Rutgers University-New Brunswick)
- Parsed ingredient amounts and units from recipes scraped from the Internet
- Merged similar ingredients with different expressions
- Semi-automatically mapped ingredients in recipes to standard food databases to get unit conversion tables
- Converted amount and unit expressions in recipes to grams
- Training different deep learning models to estimate the relative amounts of each ingredient given a food image
- Preliminary results presented in AIxFood Workshop, IJCAI 2019

➢ **Topic Classification Using Class Labels** (Summer 2017-Spring 2018, School of Information, University of Michigan—Ann Arbor)
- Studied the problem of training an initial topic classifier using only class labels
- Investigated existing semi-supervised and retrieval-based techniques for solving this problem
- Proposed a simple but effective word-embedding based approach
- Proposed a method for continued training with true labels
- Paper published in Proceedings of NAACL SRW 2019

- ➢ **Bachelor's Thesis: Research and Implementation of Image Haze Removal Algorithms** (Fall 2015-Spring 2016, Tsinghua University)
  - Proposed a new haze removal algorithm based on dark channel prior
  - Designed quantitative methods to evaluate the quality of images when ground truth is not available using cycle consistency—adding haze to images
  - Conducted user study to evaluate the results
  - Paper published in Optics and Precision Engineering

- ➢ **Research Intern: Target Recognition Based on Machine Learning** (Summer 2015, Toshiba Medical Systems)
  - Studied how image features (e.g., HOG, Haar, LBP, DOT and CNN) will affect the performance of Hough Forests in target recognition

Publications

1. Jiatong Li, Ricardo Guerrero, and Vladimir Pavlovic. Deep Cooking: Predicting Relative Food Ingredient Amounts from Images. In 5th International Workshop on Multimedia Assisted Dietary Management (MADiMa '19), Nice, France, 2019.
2. Jiatong Li, Ricardo Guerrero, and Vladimir Pavlovic. Deep Cooking: Predicting Food Ingredient Amounts from Images. In Int'l Joint Conference on Artificial Intelligence IJCAI, Workshop on AI and Food, Macao, China, 2019.
3. Jiatong Li, Kai Zheng, Hua Xu, Qiaozhu Mei, and Yue Wang. The Strength of the Weakest Supervision: Topic Classification Using Class Labels. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Student Research Workshop, pp. 22-28. 2019
4. Jiatong Li, Yu-jin Zhang. Improvements of image haze removal algorithm and its subjective and objective performance evaluation. Optics and Precision Engineering, 2017, 25(3): 735-741.

Teaching Experience

1. CS 336 Principles of Information and Data Management, (Teaching Assistant, Fall 2019, Rutgers University)
2. CS 112 Data Structures, (Teaching Assistant, Summer 2019, Rutgers University)
3. CS 344 Design and Analysis of Algorithms, (Teaching Assistant, Fall 2018, Spring 2019, Rutgers University)
4. Tsinghua English Summer Camp (Teaching Assistant, Summer 2013, Tsinghua University)

Student Organizations and Volunteer Activities

1. HKN EECS Honor Society (Elected in Winter 2017, University of Michigan—Ann Arbor)
2. Electronic Engineering Student Association for Science and Technology (Fall 2013-Summer 2015, Tsinghua University)
   - Organized contests about information and technology for freshmen every fall