Jiyang Zhang

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Education

the University of Texas at Austin — Austin, U.S.
Ph.D. in Electrical and Computer Engineering, Software Engineering track — Sep. 2019 – Present

Beihang University — Beijing, China
Bachelor in Electrical and Computer Engineering — Sep. 2015 – Jul. 2019

University of Toronto — Toronto, Canada
Exchange student major in Electrical and Computer Engineering — Sep. 2017 – Dec. 2017

Industry Experience

Machine Learning Engineer — May 2019 – Jul. 2019
INFIMIND AI Technology Company — Beijing, China

- Use Elasticsearch to build a distributed, full-text advertisement search engine with an HTTP web interface
- Design a Machine Learning system that automatically generates advertisement for the products based on their descriptions and attributes

Projects

Learning to Generate Code Comments from Class Hierarchies — Jan. 2020 – Sep. 2020
Advisor: Milos Gligoric, Assistant Professor, the University of Texas at Austin

- Formulate the novel task of generating comments for overriding Java methods
- Build a large corpus of overriding-overridden method-comment pairs, with their associated class hierarchy information
- Design a novel model that incorporates contexts from class hierarchy to generate comments for overriding Java methods

Social Media Application Development | Class Project — Sep. 2019 – Dec. 2019

- Designed a website using HTML, CSS that enables people to create an account and post photos with comments
- Create a MongoDB instance to store all the data related to the application
- Deployed the web application on Google Cloud App Engine using Flask
- Built the mobile app that works both on Android and iOS platforms using Kotlin and React Native

Integrated Learning of Features and Ranking Function in Information Retrieval — Sep. 2018 – Jan. 2019
Advisor: Jian-Yun Nie, Professor, University of Montreal

- Proposed an integrated end-to-end learning framework based on learning-to-rank to learn both neural features and the ranking function simultaneously
- Combine representation-based and interaction-based neural information retrieval models in a learning-to-rank framework

Search Engine Development | Class Project — Sep. 2017 – Dec. 2017

- Implemented the depth-first-order crawler code to traverse 20K web pages
- Constructed the PageRank algorithm to rank the web pages based on the click information for each web page
- Designed the front-end based on the Python Bottle web framework
- Deployed the web application, the front-end, and the backend persistent database on Amazon Elastic Compute Cloud

Publications

Leveraging Class Hierarchy for Code Comprehension, NeurIPS 2020 Workshop on Computer-Assisted Programming
Jiyang Zhang, Sheena Panthaplackel, Pengyu Nie, Junyi Li, Ray Mooney, Milos Gligoric

Integrated Learning of Representation Features and Ranking Function, International Conference on the Theory of Information Retrieval 2019
Yifan Nie, **Jiyang Zhang**, Jianyun Nie

Technical Skills

Languages: Python, Java, Bash, MATLAB, Latex, C/C++, JavaScript, HTML/CSS
Frameworks: Pytorch, Tensorflow, React, Node.js, Flask, JUnit
Developer Tools: Git, Emacs, Google Cloud Platform, MongoDB
Libraries: JavaParser, pandas, NumPy, Matplotlib

Teaching

EE 360C: Algorithms, the University of Texas at Austin | Teaching Assistant — Summer 2020, Spring 2020

Selected Awards

1st Academic Excellence Award of Beihang University (TOP 3%) — 2018
Academic Competition Award of Beihang University (TOP 10%) — 2018
Academic Exellence Award of Honors College of Beihang University — 2017