HANG YU

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EDUCATION

New York University — **New York City, USA**
Master's Degree in Computer Science — Sep. 2019 – May 2021 (expected)
GPA: 3.93/4.0

Shanghai Jiao Tong University — **Shanghai, China**
B.E. Degree in Software Engineering — Sep. 2015 – Jun. 2019
GPA: 3.52/4.3

SKILLS

Programming Language: Python, Java, C/C++, JavaScript, PHP
Database: MySQL, MongoDB, Redis
Framework: Laravel, Spring, Struts, Hibernate | AngularJS, Vue.js
Data Analysis: Spark, R

PROFESSIONAL EXPERIENCE

Morgan Stanley — **Shanghai, China**
Software Engineering Summer Intern — Jul. 2018 – Sep. 2018

Developed a web application for Application Security Development team; enabled user of different roles to acquire data from auto-generated massive raw records and form customized reports.

- Created administrator-defined-user-used workflow for conducting costumed reports.
- Designed and implemented backend data model based on source data stored within IBM DB2.
- Visualized SQL script assemblies and filter setting for report auto-generation.

SELECTED PROJECTS

Neighborhood - Social Networking Website *Course Project* — Nov. 2019 – Dec. 2019

Designed and implemented a web application allowing users' communication in neighborhood. User could specify and manage locations, send and receive messages to others and search in map view.

- Design and implement robust database schemas supporting complex business logic.
- Enabled authentication, database manipulation and security control in backend system based on Laravel.
- Utilized Vue.js, Element UI and Google Map API to support the functionality of the front-end system.

Research and Implementation of Code Search Using Mixed Code Representation — Dec. 2018 – Jun. 2019

Research & Graduation project in SJTU

Introduced deep learning, information retrieval and machine learning to perform effective code-search task.

- Represent and validate Lucene-based conventional Information Retrieval model including CodeHow, WordNet, QECK and Deep Learning-based DeepCS model.
- Design duet algorithm incorporating Information Retrieval and Deep Learning approaches to extract more feature of code snippet, and gain better MRR and NDCG evaluation result.

COOL Language Compiler *Course Project* — Mar. 2020 - May 2020

Implemented a simple full-operational compiler for the Cool language using C++, covering components including scanner, parser, semantic analyzer and code generator.

- Designed and implemented AST to fully support static type checking.
- Augmented AST to emit correct runnable MIPS assembly code efficiently.

On-Line Book Store *Course Project* — Mar. 2018 – Jun. 2018

Developed an online bookstore website using Spring Struts Hibernate framework, allowing browsing through categories, searching for goods, adding to cart, placing orders and administration

- Monitored and prevented XSS, SQL injections; encrypted user information transaction with RSA algorithm; applied JAAS secured log-in mechanism to promote system security levels.
- Enabled read/write splitting, master-slave backup on MySQL database, applied cache layer utilizing Memcached between database and apache server.
- Utilized Logstash to export 50,000 records to Elasticsearch engines and visualized search via Kibana.

PUBLICATIONS

Shuhan Yan; **Hang Yu**; Yuting Chen; Beijun Shen; Lingxiao Jiang. **Are the Code Snippets What We Are Searching for? A Benchmark and an Empirical Study on Code Search with Natural-Language Queries,** *2020 IEEE 27th International Conference on Software Analysis, Evolution and Reengineering (SANER)*