ZIYI YAN

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EDUCATION

Carnegie Mellon University *Aug. 2018 - Dec. 2019*
M.S. in Computer Science (4.0/4.0) Pittsburgh, PA
Course: Search Engine, Machine Learning, Web Development

Nanjing University *Aug. 2014 - June 2018*
B.S. in Information Science (90.2/100 Rank: 1/76) Nanjing, China
Course: Design and Analysis of Algorithms, Pattern Recognition, Java OOP, Database, Computer Vision

University of California, Davis *Mar. 2017 - June 2017*
Global Study Program, Major in Computer Science (4.0/4.0) Davis, CA

SKILLS

Programming Languages	Java, C++, JavaScript, Python, SQL, C, Scala, MATLAB, HTML
Tools	Unix, Linux, GDB, SQL Server, MongoDB, Git
Libraries and Frameworks	Django, Node.js, Express.js, Play MVC Framework, VLFeat, Bootstrap

INTERNSHIP

Chinese Academy of Sciences Jan. 2017 - Mar. 2017
Software Engineer Intern Shenzhen, China

- Developed the front-end and back-end of a platform based on **Scala** and **Java** to search optimal raw material suppliers for customers utilizing **HTML** and **CSS** under **Play MVC framework**
- Refactored Administration Backstage with **Ajax** and Rewrote Parameter Extraction Module with **JavaScript**
- Implemented **Tyson Polygon** with Scala, reducing search time for best suppliers from 9.3s to 5.4s

PROJECTS

Text-based Search Engine, CMU (Java) Aug. 2018 - Oct. 2018

- Designed and implemented a text-based large scale search engine using **Java** indexed with Lucene API to retrieve more than 500,000 Wikipedia documents
- Supported query operators(NEAR, WINDOW, WSUM, WAND and etc.) and retrieval models including Ranked Boolean, BM25, language statistic model like Indri and etc.
- Applied SDM (Sequential Dependency Model), MRM (Multi-Representation Model), unsupervised pseudo relevance feedback to expand queries and improved MAP from 0.132 to 0.177

Cosmetic Sharing Platform, NJU (Node, Express, Javacript, HTML) Apr. 2018 - July 2018

- Developed an **Node.js** based web application with review, sort, and advanced search functionalities
- Built reliable **RESTful APIs** using **Express.js** and stored data with **MongoDB**
- Implemented an image-search module using **harris-corner detector**, **k-means** and **Bag-of-words model**

Human-Face Recognition, NJU (Python) July 2016 - Nov. 2016

- Utilized **2D Principal Component Analysis** via **Python** to achieve sufficient feature preservation for face representaion and used Principal Component Analysis as contrast
- Implemented a modified **SVM** algorithm, increasing classification correctness from 72% to 85%

Dynamic Memory Allocator, CMU (C) May 2018 - June 2018

- Implemented functions of allocating, reallocating and freeing storage with **C**
- Improved space utilization from 50.0% to 73.4% and maintained high throughput (14891 kops/sec) based on **segregated free lists** and minimized meta-data in the free blocks via bit manipulation