

Nan Deng

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TECHNICAL SKILLS

Experienced with **Python**, **Java**, **JavaScript**, **ReactJS**, **NodeJS**, **PHP**, **AngularJS**, **TypeScript**, and **MySQL**;

Familiar with web framework **Django**, and big data framework **Hadoop** and **Flux**.

EDUCATION

University of Michigan

August 2016 - April 2018

M.S. in Information Analysis and Retrieval, GPA 3.75/4.0

EXPERIENCE

Institute for Research on Innovation & Science, Ann Arbor — *Web Developer*

August 2017 - Present

- Develop an auto-triggered file parsing tool that inputs data uploaded by users into different databases, and encrypt the file after data parsing using **PHP**, **SQL**, and **Python** to guarantee information security
- Cooperate with colleagues to build new web portal through modules for submitting researcher application, and generating interactive visualization reports using **ReactJS**, **Bootstrap**, and **SQL**

Bright Oceans Corporation, Beijing — *Software Development Engineer Intern*

June 2017 - August 2017

- Developed an instant filter system to filter and categorize data collected from city main streets into database, and allow SDEs across teams to fetch them correspondingly using **PHP**, **Hadoop**, and **SQL**
- Designed and developed visualization for governmental users to track traffic status in peak hour, implemented new features of daily report, and excessive flow notification using **JQuery**, and **D3.js**

Welfare Fund for the Handicapped, Tianjin — *Software Development Engineer*

July 2015 - May 2016

- Built a data input application to collect data of both charitable donors and receivers for donations match according to donor's target requirements using **AngularJS**, and **MySQL**; reduced time-consumption for more than 50%
- Designed and programmed official website, kept daily maintenance by **HTML**, **Bootstrap**, and **JavaScript**; initiated using website to give management and publicity to the foundation

PROJECTS

Comment Rank for Community Question Answering — *Natural Language Processing*

- Extracted feature vectors on inter-pair similarity, intra-pair similarity, and heuristic perspective between both question-comment and comment-comment pairs using **Python** package **nlTK**, and **word2vec**
- Applied **Support Vector Machine (SVM)** and **TextRank** on a Community Question Answering forum using **Python** machine learning package **sklearn**, re-ranked comments according to their relevancy associated question thread; achieved an accuracy around 68.75% by SVM and a 45.9% MAP by TextRank

Restaurant Evaluation through Yelp & Instagram — *Data Manipulation and Analysis*

- Analyzed what elements mainly influence the star rating on Yelp's business through **Python** and **R**, conducting sensitive analysis towards customer reviews to identify factors that could help improve restaurant performance

Linear Programming Interactive Visualization — *Data Visualization*

- Visualized two dimension Linear Programming via **D3.js**, designed interactive toolkit for users to better understand by changing distinct parameters