Tiangang Chen

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Education

Duke University Durham, NC 2018/8 – 2020/5

M.S. Computer Science

- Teaching assistant for data science and database courses. Maintained and developed course material and course infrastructure (Python, shell scripts).

University of Illinois at Urbana–Champaign Urbana, IL 2016/8 – 2018/5

B.S. Computer Science

- Courses: **Applied Machine Learning, Artificial Intelligence, Data Mining, Database System, Distributed System, Software Engineering**

Skills

Programming language: **Python, Java, C, JavaScript, SQL**

Technologies: **React, Django, Vue.js, NumPy, scikit–learn, pandas, Docker, MySQL, Linux, AWS**

Work Experience

John Deere Technology and Innovation Center Champaign, IL 2018/6 – 2018/8

- **[Java, Kotlin, Groovy, shell script]** Software engineer internship. Implemented Jenkins–based testing and continuous integration infrastructure. Fine–tuned gradle build process to reduce network load and build time. System was deployed internally and greatly improved dev workflow and efficiency.

Redshift Inc Beijing City 2017/5 – 2017/7

- **[React, Node.js]** Software engineer internship. Full–stack design and implementation of an audio processing service. Utilized cloud services for server backend. Shipped feature to hundreds of users.
- [link] **[JS]** Developed a cloud service client library for React Native. Code partially open sourced.

Recent Projects

[link] **[Python] "KtLDA".** School project. Implemented Latent Dirichlet Allocation with Gibbs Sampling. Improved execution speed using Cython. Performed analysis with competing algorithms on document classification task. Code and results open sourced.

[link] **[JS, SQL, Python] "2 Red Hearts".** School project. Full–stack design and implementation of a website from scratch. Implemented salted password storage and automated service email. Created heat map and real–time location sharing using Google Maps API and WebSocket. Implemented a collaborative filtering recommendation algorithm using NumPy. The website was viral among UIUC classmates.

[JS, Docker] Developed a system security testbed using Docker. Created a client library for generating realistic HTTP requests to the system. Developed Makefiles and shell scripts for automation. The system was handed off to UIUC PERFORM group for research purposes.

[link] **[JS]** Developed an ethical crawler using headless Chromium. Resolved multiple anti–crawler measures including page scroll detection, dynamic loading, and HTTP referrer check.