Junru Liu

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SUMMARY

Aspiring master student in Computer Science seeking SDE internships for 2023 summer. Prior internships and experience in Python backend and full stack, Java backend, and testing. Eligible to work in the U.S. as part of the F-1 Curricular Practical Training (CPT). Able to start May 2023.

EDUCATION

Texas A&M University   College Station, Texas
Master of Science in Computer Science   *May 2024 (expected)*

Xi'an Jiaotong-Liverpool University   Suzhou, China
Bachelor of Science in Information and Computing Science   *July 2022*
- CGPA: 3.98/4.0
- Relevant Coursework: Data Structures, Algorithms, Database, Networking, Advanced OO Programming

SKILLS

Programming Languages: Python, Java, C/C++, JavaScript, HTML/CSS
Frameworks & Databases: Spring Boot; MySQL, MongoDB, Neo4j, PyTorch, Tensorflow
OS & Libraries: Linux; PyMongo, Flask, Pandas, NumPy, Matplotlib, Plotly, OpenCV
Languages: English (Fluent), Spanish (Conversational), Chinese (Native Speaker)

WORK EXPERIENCE

Xi'an Jiaotong-Liverpool University   Suzhou, China
Python Backend - Intern   *October 2020 – March 2021*
- Worked with Beijing Telecom to build an intelligent policy management system for policy query and analysis
- Converted policy documents from Word to JSON and implemented automatic data entry into **MongoDB** database (400% more efficient)
- Built a module of policy query by columns using **PyMongo** and adopted **inverted index** with Whoosh to support policy keyword searches (600% faster)
- Implemented a policy analysis module for **word cloud** analysis and policy topic analysis

Shanghai Ideal Information Industry   Shanghai, China
Python Full Stack - Intern   *June 2020 – September 2020*
- Classified citizen complaints into various categories using **TF-IDF** with an average accuracy of 84%
- Developed a question-answering system using **text similarity** techniques to support intelligent citizen hotline with **Flask**, **HTML**, **CSS**, and **JavaScript** with an average accuracy of 75%
- Established a platform enabling users to extract keywords online from a self-uploaded document using 3 supported methods using **Flask**, **HTML**, **CSS**, and **JavaScript**

Emerson Electric   Shanghai, China
Wechat Frontend - Intern - Remote   *July 2020 – September 2020*
- Led a team of four to develop a Wechat mini program to collect and manage equipment maintenance orders
- Designed the user interfaces and developed the interaction using **raw Wechat framework**
- Tested the interfaces of *admin* using **Postman**
- Organized weekly group meetings and served as a mediator to assist members towards our resolutions

PROJECTS

Second-hand Item Information Exchange Platform
Java Backend   *March 2021 – May 2021*
- Led a team of nine to create a web app for university students to trade second-hand items in **scrum** process
- Developed *registration* and *product display* modules using **Spring Boot**, **MyBatis**, and **MySQL**
- Tested the interfaces of *password retrieval* and *product upload* using **JUnit** to detect software failures

Large Efficient Flexible and Trusty (LEFT) Files Sharing System
Python Backend   *October 2020 – December 2020*
- Constructed a **P2P** file sharing application to support file synchronization among multiple nodes with **multiprocessing** and **multithreading** using **socket** programming in **Linux**
- Designed a protocol based on **TCP** to achieve fast and reliable synchronization of large files, including interruption recovery (70% faster on average)
- Developed the encryption function using AES-CFB during file transfer to increase data security