

# Junru Liu

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## EDUCATION

### Texas A&M University

Master of Computer Science, CGPA: 4.0

College Station, TX

Aug 2022 – May 2024 (expected)

### Xi'an Jiaotong-Liverpool University

Bachelor of Science in Information and Computing Science, CGPA: 3.98

Suzhou, China

Sep 2018 – Jul 2022

## EXPERIENCE

### Software Engineer Intern

Arbin Instruments

May 2023 – Present

College Station, TX

- Developed the Schedule Editor page of Arbin's global customer software over 20 countries using **React** and **Figma**
- Engineered an **object-oriented** architecture for a Label Generator software empowering the testing team using **C#**
- Launched a **GUI** Diagram Generator application for testing engineers with **C#** resulting in a 50% efficiency increase
- Utilized **Azure DevOps** for **CI/CD** pipelines in **Agile (Scrum)** development

### Software Engineer Intern

Shanghai Ideal

Jun 2020 – Sep 2020

Shanghai, China

- Established a keyword extractor with **Flask**, **HTML**, **CSS**, and **JavaScript (jQuery)** improving efficiency by 60%
- Classified citizen complaints into various categories using **TF-IDF** with 84% accuracy in **Python**
- Developed a Question-Answering system in **Python** to support intelligent citizen hotline with an accuracy of 75%

## PROJECTS

### Apartment Finder | *Python, Django, React, MySQL, AWS, Git*

- Led a team of six to rebuild *JJ Group Lease's* apartment finder system leading to a 60% increase in efficiency
- Implemented *Sign Up* and *Submit Request* with **Python (Django)** and **JavaScript (ReactJS)** with **REST** APIs
- Adopted **MySQL** database to retrieve and store apartment and user data
- Accomplished automated **Unit Tests** and **Integration Tests** using **Django Test** with 90% code coverage
- Deployed the system to **AWS** and **Heroku** for public access
- Employed **Git** for version control and Pivotal Tracker for **Agile (Scrum)** Project Management

### Life Cycle Relauncher | *Java, Spring Boot, VueJS, MySQL, Azure, Git*

- Guided a nine-person team to develop a flea market application for second-hand goods for students at XJTU
- Developed **REST** APIs for *Product Display* and *Password Retrieval* with **Java** and **Spring Boot**
- Built a **MySQL** database and utilized **MyBatis** for efficient data mapping and interaction
- Implemented automated **Unit Tests** and **Integration Tests** with **JUnit** to detect software failures
- Utilized **Git** for version control and **Azure DevOps** for **Agile (Scrum)** Project Management

### Power Transfer | *Linux, Python, Parallel Computing, Socket, Encryption*

- Built a **Peer-to-Peer** file sharing application with **multiprocessing** and **multithreading** in **Linux** with **Python**
- Designed a new **TCP**-based protocol for **real-time** reliable and efficient multi-purpose communication
- Adopted compression and encryption to achieve fast and secure transfer for large files up to 2GB within 50s
- Implemented seamless transfer recovery by effectively managing interruptions

### Policy Master | *Python, MongoDB, NLP*

- Worked with *Telecom* to build an intelligent policy management system for policy query and analysis
- Automated transformation of Word policy documents to **JSON** and parsed data into a **MongoDB** database
- Realized policy query by keywords using **PyMongo** and utilized **inverted index** to accelerate searches by 600%
- Developed features of **word cloud** analysis, topic analysis, and **summary extraction** for each policy document

## TECHNICAL SKILLS

**Languages:** Python, Java, C#, C, C++, Ruby, SQL, PostgreSQL, JavaScript, TypeScript, HTML/CSS

**Frameworks:** React, Django, Spring Boot, JUnit, Flask, PyTorch, Tensorflow

**Developer Tools:** Git, AWS, Azure DevOps, Heroku, Pivotal Tracker

**Libraries:** Winforms, Tkinter, pandas, NumPy, Matplotlib