

Junru Liu

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EDUCATION

Texas A&M University

Master of Computer Science, CGPA: 4.0

August 2022 – December 2024 (expected)

College Station, TX

Xi'an Jiaotong-Liverpool University

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

September 2018 – July 2022

Suzhou, China

EXPERIENCE

Tesla

Software Engineer Intern

January 2024 – May 2024

Fremont, CA

- Implemented an employee management system for Human Resource needs targeting **140k** users in **C# .NET Core**
- Achieved a **40%** latency reduction by optimizing **MySQL** database queries and indexing, and utilizing **Redis** cache
- Developed **REST APIs** to overhaul the security group permission structure enhancing persona based **access control**
- Build and integrated UI components with the backend using **Angular (TypeScript)** following Figma prototypes
- Partnered with **cross-functional** teams for requirements and quality assurance with weekly **release** to **production**
- Utilized **Git**, **Jira** and **Jenkins** for **Agile (Scrum)** development, project management, and **CI/CD**

Analog Devices

Software Engineer Intern

September 2023 – December 2023

Durham, NC

- Developed a cross-platform **customer-facing** GUI software for next generation of chip's configuration in **Linux**
- Incorporated **Object-Oriented** design following **MVVM** pattern in **C#** interacting with **embedded** applications
- Contributed to a robust **unit testing** suite with **90%** code coverage in **NUnit** to validate components' functionalities
- Collaborated with **cross-functional** teams to gather stakeholder requirements and craft new features with enhanced user experience based on corresponding lower level services

Arbin Instruments

Software Engineer Intern

May 2023 – August 2023

College Station, TX

- Developed the frontend UI of hardware management platform for customers using **React** for users in over 20 countries
- Launched a Desktop software to visualize hardware connections with **Python** Tkinter improving test efficiency by **50%**
- Built a Windows software to generate templates of labels for hardware device information with **.NET Framework**

PROJECTS

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

- Built a **Peer-to-Peer** file sharing application with **multi-processing** and **multi-threading** 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 transfer recovery upon reconnection by logging file blocks to track synchronization progress

Policy Master | *Python, MongoDB, NLP*

- Built an intelligent **policy management system for policy query and analysis** in **Python** for *Telecom*
- Utilized **Graph Convolutional Neural Networks** to extract summaries of lengthy policies with **PyTorch**
- Developed policy query by keywords using **PyMongo** and utilized **inverted index** to accelerate searches by **90%**
- Implemented **word cloud** analysis based on frequency and topic analysis using **LDA** modeling with **Python**
- Automated transformation of Word policy documents to **JSON** and parsed data into a **MongoDB** database

TECHNICAL SKILLS

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

Frameworks & Patterbs: OOP, MVC, .NET (Core & Framework), React, Angular, Django, Spring Boot, JUnit, Flask

Developer Tools: Git, Jenkins, AWS, Azure, Jira, Bitbucket