Yuqing Jian
LinkedIn | GitHub
yuqingj2@illinois.edu
(217) 721-0439

Education

- **University of Illinois Urbana-Champaign** Champaign, IL
  B.S. in Mathematics and Computer Science *Jan 2023 - Jun 2026*

Skills

- **Languages**: C/C++, Python 3/2, Java, JavaScript, SQL, HTML, CSS
- **Tools**: Linux, Selenium, PyTorch, Scikit-Learn, MATLAB, Git, Docker, NodeJS, Django

Experience

- **Qiyin Tech** Beijing
  Co-founder and Algorithm Developer *Nov 2021 - Feb 2023*
  - **Algorithm development for analyzing and generating music**: Designed music evaluation and generation system by music theory and neural network. Promoted the transmission and exchange of music, while focusing on the field of web3 and meta-universe to create a music platform−Qiyin Music−received $300,000 in investment. Implemented by **C++** and **Python**. Our paper in IEEE ICME '22 (Top 4 Conference in Computer Music)
  - **System Deployment**: Used **ONNX** export to make the algorithm model lightweight and deployed the model on a **Linux** remote server. Deployed high-performance **HTTP** and reverse proxy web server **Nginx** on websites, and completed application layer requests and responses relying on HTTP protocol. Built a client-side interface using **Redis-py**, a Python interface to the **Redis key-value** database. Redis-py uses a connection pool at the connection level to the Redis database. The site can be accessed from any device.
- **Tsinghua University NLP Lab** Beijing
  Research Assistant *Mar 2022 - Jan 2023*
  - **Algorithm development for analyzing and generating lyrics**: Used **Scrapy** to retrieve song information from Music website. Established an effective data cleaning solution by **Python**, obtained Chinese lyrics data containing key information such as structural and topic information by **KeyBert**, and built models based on **Huggingface** that can perform controllable lyrics generation with specific keywords, length, and other elements.
- **SenseTime** Beijing
  Algorithm Intern *Jun 2021 - Dec 2021*
  - **Development of AI-education Products**: Researched and implemented new algorithms to improve the performance of existing computer vision models. Evaluated the performance of different models, simplified and combined them into packages used for AI-education. Participated in the teaching of AI algorithm courses. The course content include **face recognition**, **driverless car** and so on.

Projects

- **Chord Recognizer** | *The fastest and most accurate chord extractor.* *Jul 2022 - Aug 2022*
  - For the test midi, it is currently possible to achieve chord recognition speeds in the 100ms range.
  - Used **Decision Tree** to compute the most-likely chord, applied **Numba** for jit acceleration.
- **Beijing Subway Navigation** | *Subway navigation system with visualization function.* *Agu 2022 - Sep 2022*
  - Used **Dijkstra** algorithm to deal with the navigation problem. The results was visualized by **OpenCV**.
- **Tong Music** | *The first application of GPT in lyrics generation project in China.* *Dec 2019 - Dec 2020*
  - A music platform was developed using **Django** and **html**, which allows users to create music online by using artificial intelligence technology. The generated songs can be shared and traded through the platform.
  - Used **Python** and **MySQL** to build a database and execute database query and modify operations automatically.
  - Used improved **GPT-2** model to train lyrics data, users can choose theme, main content and rhyming style for the machine to compose and sing on its own. All the functions can be experienced on the website in one click.