

# Runyu Yue

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## SUMMARY

Seeking a full-time software engineer position starting from June 2025.  
Incoming Master's student at Cornell University with a wide range of web and mobile development projects.  
Strong knowledge of computer science and solid skills in Java, C, Python, SQL, HTML/CSS, and JavaScript.

## TECHNICAL SKILLS

**Programming Language:** Java, Python, JavaScript(ES6), TypeScript, Haskell, Racket, C, Golang  
**Database and Cloud:** MySQL, PostgreSQL, MongoDB, Firebase, RDS, AWS, Amazon App Runner, Volcengine(cloud computing service of ByteDance), Vector Store  
**Web Development:** React, Angular, HTML/CSS, Ant Design, Spring Boot, NodeJS, Express, Token, Socket.IO, PeerJS, PixiJS, RESTful APIs  
**AI Related:** OpenAI GPT-3.5 Turbo API, Langchain  
**DevOps and Tools:** GitHub, Docker

## EDUCATION

<b>Cornell University</b>	<b>Ithaca, NY, United States</b>
Master of Professional Studies in Information Science	Sep 2024 - May 2025
<b>Relevant Courses:</b> Business Intelligence Systems, Designing Technology	

<b>University of Toronto</b>	<b>Scarborough, ON, Canada</b>
Bachelor of Science in Computer Science, GPA: 3.72/4.0	Sep 2020 - Jul 2024
<b>Relevant Courses:</b> Data Structures, Software Design, Software Engineering, Programming on the Web, Introduction to Databases, Computer Networks, Artificial Intelligence, Operating Systems	

## WORK EXPERIENCE

<b>Douyin, ByteDance</b> (parent company of TikTok)	<b>Beijing, China</b>
Full-time Intern at Commercial Security Department	May 2023 - Jul 2023
<ul style="list-style-type: none"><li>Enhanced data filtering with optimized <b>MySQL</b> statements, improving accuracy by 20% and ensuring robust scalability and service reliability. Visualize local business trends using <b>Python</b>.</li><li>Developed and deployed an online stay rental application using <b>React</b>, <b>Ant Design</b>, <b>Spring Boot</b>, <b>PostgreSQL</b>, and <b>Volcengine</b>.</li><li>Built services with <b>Spring Boot</b> to handle stay management, search, and reservations and secured the application with <b>token-based authentication</b> via <b>Spring Security</b>. Engineered backend services using <b>Spring Boot</b>, supporting essential features such as stay upload, deletion, search, and reservation.</li><li>Created a responsive user interface using <b>React</b> and <b>Ant Design</b> to enhance user experience.</li><li>Managed <b>PostgreSQL</b> for user data storage and integrated <b>Volcengine</b> for media storage.</li><li>Deployed and maintained the application on <b>Volcengine</b>, ensuring high availability and <b>token-based authentication</b> utilizing the <b>Spring Security</b> framework to protect user data.</li></ul>	

## PROJECTS

<b>Twitch+: A Personalized Twitch Resources Recommendation Engine</b>
<ul style="list-style-type: none"><li>Designed and built a full-stack web application for users to search Twitch resources (stream/video/clip) and get recommendations that largely improved the user experience</li><li>Built a web page with a rich and user-friendly experience using <b>React</b> and <b>Ant Design</b></li><li>Created <b>RESTful APIs</b> to handle HTTP requests and responses and used <b>MySQL</b> database on <b>Amazon RDS</b> to store game data fetched from Twitch API</li><li>Designed recommendation algorithms to implement Twitch resource recommendation</li><li>Deployed to <b>Amazon App Runner</b> for public access</li></ul>

### **Next AI: A Full-Stack Web-Based Q&A AI Agent for PDF Document Queries**

- Engineered an interactive conversational UI leveraging **React** and **Ant Design**, enabling users to effortlessly upload and interact with PDF documents in real-time
- Architected and implemented RESTful APIs via **Express** and **Node.js**, optimized for request handling
- Utilized a memory **vector store** to cache generated embeddings for efficient retrieval
- Integrated **OpenAI's GPT-3.5 Turbo API** and **Langchain** technologies, resulting in a sophisticated AI Agent capable of document loading, splitting, storage, retrieval, and output functionalities

### **Game Chat Software Development**

- Designed and implemented a web-based virtual social platform with **MEAN Stack** to provide users with new ways to socialize, interact, and collaborate online
- Allowed users to manipulate their characters in a virtual game space and communicate with other users via voice using **PeerJS** to implement audio communication between users
- Used **PixiJS** to create graphical objects and utilized **Socket.IO** to implement the character movement with Google auth for the authentication that improved the overall security of the application

### **Development of LAN Speed Testing Tools**

- Designed user-friendly tools without the involvement of high-level libraries in **C** and **Python** to offer a robust and efficient way for LAN speed tests
- Provided clear metrics and data visualization using **Pandas** and **Matplotlib** library in **Python** to facilitate understanding of the network's performance
- Implemented stop & wait, fixed size, and sliding window protocols during data transmission