

Yuting Zhou

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EDUCATION

Rutgers University , New Jersey, US	09/2024 - Expected 06/2026
• Major: Master Student in Computer Science	
Shanghai Institute of Technology , Shanghai, China	09/2020 - 06/2024
• GPA: 3.7, Ranking Top 10%	
• Major: Bachelor of Engineering in Software Engineering	

AWARDS & CERTIFICATES

- School-level Scholarship: 2nd Prize (2023, 2022), 3rd Prize (2022, 2021, 2020)
- Alibaba Cloud Certified Associate - Big Data
- Huawei Certified ICT Associate - Intelligence Computing

RESEARCH EXPERIENCE

Research Assistant Python, PyQt, Pandas, NumPy, Ollama, Docker	06/2025 - Present
RUTGERS Center for Advanced Infrastructure and Transportation (CAIT)	New Jersey, United States
• Prepared and validated over 80k+ rail network records, by designing automated Pandas scripts to detect anomalies and cross-check schema consistency.	
• Enhanced NJT Graph script, reducing runtime from 8 min to under 3 min, by refactoring loops and applying NumPy vectorization.	
• Built a Qt-based GUI adopted by two research groups and a non-programming team, achieved by modularizing Python back-end functions and integrating with PyQt.	
• Automated consistency checks using LLM APIs and local deployments, reducing manual verification effort by over 50% through prompt engineering and batching API calls to Dockerized Ollama models.	

INTERNSHIP EXPERIENCE

Front-end Engineer Intern JavaScript, Vue, WebSocket, MongoDB	06/2023 - 08/2023
Shanghai Tenchii Digital Tech Co., Ltd. (Tencent × Shanghai Metro Joint Venture)	Shanghai, China
• Contributed to reducing Shanghai Transit App page load latency by 30%, improving active user retention by 10%, by implementing lazy loading, prefetching frequently used assets, and optimizing image compression.	
• Assisted in building a real-time lottery barrage system supporting 500K+ concurrent users with sub-200ms latency by introducing WebSocket channels with heartbeat checks and MongoDB indexes for fast lookups.	
• Restructured website modules, enabling over 5 new features in one quarter, through componentization in Vue and centralizing state with Vuex for maintainability.	
• Delivered 3 prototype interfaces for cross-team workflows, by collaborating with PMs to gather requirements and iterating quickly with Axure wireframes and Vue prototypes.	
Software Test Engineer Intern Pytest, JUnit, Selenium	06/2022 - 09/2022
Shanghai Spacecraft Electromechanical Equipment Co., Ltd.	Shanghai, China
• Built a test environment covering 10+ hardware configurations and executed 50+ automated and manual test cases, by writing Pytest/JUnit suites and configuring a CI pipeline.	
• Detected and documented 5 high-priority defects, reducing production risk by around 20%, through Selenium-based UI automation and stress testing.	

PROJECT EXPERIENCE

AyeNote Online Cloud Notes Vue 3, Django, MySQL, BeautifulSoup	GitHub	05/2022 – 04/2023
• Improved parsing accuracy from 56% to 78% when crawling 30k+ structured pages from public datasets on Douban, Zhihu, and IMDb, by building an asynchronous crawler with aiohttp + BeautifulSoup and applying SimHash-based deduplication.		

- Reduced per-note curation time by 60% (from 3–5 minutes to 1–1.5 minutes), by integrating LLM-based summarization with chunking, retries, and caching.
- Enabled real-time collaboration for 20–30 concurrent users with p95 latency under 200ms, by leveraging Django Channels with Redis pub/sub.
- Optimized responsiveness to TTFB and API latency p95 latency under 250ms, by applying Nginx caching, Brotli compression, and database indexing with read replicas.

King of Bots | Vue 3, Spring Boot, MySQL, WebSocket, JWT GitHub 05/2022 – 11/2022

- Built a full-stack interactive web platform combining Vue 3 and Spring Boot.
- Designed 15+ REST APIs with JWT authentication, ensuring zero unauthorized incidents, by enforcing token refresh logic and role-based access control.
- Supported 50+ concurrent battles with <200ms, by optimizing WebSocket message queues and using Redis pub/sub for fast matchmaking.
- Reduced vulnerability risk through salted MD5 and MySQL persistence, validated via penetration testing scripts.
- Increased average session time by 20%, by applying responsive Bootstrap 4 design and A/B testing different UI layouts.

Real-time Pose Estimation | MoveNet, PyTorch, TensorFlow GitHub 09/2023 – 05/2024

- Achieved real-time skeletal detection at 30+ FPS using MoveNet, by pruning model size, applying GPU acceleration, and batching tensor operations in PyTorch.
- Delivered >80% accuracy on exercise recognition, by designing evaluation logic with reference pose datasets and adding smoothing algorithms for noisy frames.
- Supported 3 exercise types with an average precision of 0.87, through fine-tuning a TensorFlow multi-class model.
- Conducted beta testing with 50+ users, receiving over 70% positive engagement, by building a demo with live feedback and collecting feedback via Tencent Questionnaire.

EXTRACURRICULAR EXPERIENCE

Member, Algorithm Competition Club, Shanghai Institute of Technology 09/2022 - 05/2023

- Organized 3 algorithm workshops and contests with around 15 participants (each), by coordinating schedules, drafting course plans, and assisting the president in curriculum design.

Member, P.L Software Engineering Club, Shanghai Institute of Technology 03/2021 - 05/2023

- Resolved over 30 member technical questions per semester, by providing one-on-one guidance and sharing troubleshooting resources.

Member, Robot Enthusiasts Association, Shanghai Institute of Technology 02/2021 - 05/2023

- Managed over 10 club activities annually and prepared equipment for 30+ members, by handling logistics, scheduling, and communication across teams.

SKILLS & LANGUAGES

Programming	C++, Java, Python, Go
Operating Systems	Windows, Linux, macOS
Databases	SQLite, MySQL, Redis, MongoDB
Frontend	HTML, CSS, JavaScript, Node.js, Vue 3, React, Next.js
Backend	Spring/Spring Boot, Django/Flask/FastAPI, Gin/GORM, RESTful APIs, Microservices
Containers	Docker, Kubernetes (K8s)
Data & ML	NumPy, Pandas, scikit-learn, PyTorch/TensorFlow
Languages	English, Mandarin Chinese (<i>bilingual</i>)