

Anthony Jiaqi Chen

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Education

Northwestern University

Sept 2024 - Dec 2027

BS/MS in Computer Science, GPA: 3.87/4.0, Dean's List 5/6 Quarters, CS 150 Peer Mentor

Thesis: Stability in Dynamic Coalition Formation of Altruistic Hedonic Games (Advisor: Edith Elkind)

University of Michigan - Ann Arbor — BSE Engineering, GPA: 3.96/4.0, MRADS

Sept 2023 - May 2024

Experience

ByteDance

Bellevue, Washington

Site Reliability Engineering Intern - Data Infrastructure

June 2026 - Present

- Reverse engineered a broken cluster management platform for the 30 person Byte Message Queue (BMQ) team during the team's metadata database migration, tracing live network API calls to recreate functionality against the new backend
- Designed a streamlined interface enabling engineers to upgrade clusters, scale cluster counts, and access Grafana dashboards directly, replacing a redundant legacy workflow and reduced load time of instance statistics display by 53%
- Cut cluster health load times from 2 min to 200 ms by replacing on-demand queries with an hourly cron job precomputing disaster recovery data into a metadata layer, surfacing front-end warnings for internal server scalability guideline violations

Swinburne Cybersecurity Lab

Melbourne, Australia

Research Intern

June 2025 - August 2025

- Replicated and verified 2 experiments on the university's HPC network, assessed reliability and robustness on a custom 1,000 photo dataset in PyTorch, and documented cross model detection challenges across GAN and Diffusion architectures
- Built a Python framework automating preprocessing and metric logging for deepfake detection, cutting setup time by 40% and enabling reproducible benchmarks across 3 models

Oppo

Shanghai, China

Software Engineer Intern - Kernel and Platform Development

June 2024 - July 2024

- Contributed to the Platform and Kernel Development Team by adapting 2 open source scheduler benchmark programs for the Linux kernel, the current internal tool is used across 3 teams by more than 60 people within the company
- Tuned and optimized process threads, mutexes, and semaphores (including implementing optimistic spin locks) in the Linux kernel, improving workload throughput by 10% under multi-core workloads on new Oppo model
- Authored a 15-page technical guide and developed Bash automation scripts for calibration, automated testing, and Excel result logging, cutting manual testing time by 20 hours/month and standardizing 50+ test cycles weekly

Projects

Software Engineer

Evanston, IL

Village on Wimpy Nodes

April 2026 - Present

- Explored how Village (Prescience Lab), a NESL data parallel language compiler and runtime can be extended to computers on cheap SoCs with MPI distribution, utilizing a 20 node Raspberry Pi V cluster each with 16 GB of RAM
- Created cross compilation workflow from x86 architecture to aarch64 which extracted fgraph binaries and applied them to pre-compiled runtime, which allowed Raspberry Pi V cluster to run programs at 98% RAM capacity
- Created dynamic partitioning scheduler which performs 6.7x the efficiency of round robin first come first serve scheduler, leveraging data locality through a voting process that minimized cross node data transportation

Full-Stack Developer

Evanston, IL

Bookhush.com - Web Novel Reading Platform

March 2025 - Present

- Built a full-stack web novel platform in Vite/TypeScript ($\approx 2,000$ LOC) on AWS Amplify (GraphQL API, Cognito auth, S3, DynamoDB), supporting story management and real-time text-to-speech across 50GB+ of audio/text content
- Developed a Dockerized microservices architecture with a Python FastAPI TTS service on the Piper neural engine, achieving a 95% cache hit rate and sub-200ms response times

Additional

Languages: Fluent in Mandarin, English, and conversational in Shanghai dialect, studied Japanese for 4 years

Technical Skills: C++, MATLAB, Python3, Bash, AWS, SQL, Javascript, Node.js, Vue.js, Golang, Redpanda/Kafka

Awards: Freshacks Hackathon First Place, William J. Branstrom Freshman Prize at University of Michigan