

Xiangyu Shi

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SUMMARY

Software Engineer with an M.S. in Computer Science from RIT and 3+ years building distributed backend services in production. Designed event-driven cloud infrastructure ingesting telemetry from large fleets of connected devices and shipped a real-time communication service used daily by hundreds of users, comfortable owning services end to end in small, fast-moving teams. Seeking a full-time Software Engineer role (Backend/Cloud) starting 2026.

TECHNICAL SKILLS

Languages: Python, C#, JavaScript, TypeScript, Java, C++

Frameworks: ASP.NET / .NET Core, Node.js, Express.js, React, Next.js

Databases: PostgreSQL, MongoDB, Microsoft SQL Server, MySQL

Cloud / DevOps / Tools: Azure, AWS, Docker, Git, Claude, Gemini, GPT

EXPERIENCE

Ortusify LLC — Software Engineer

Jan 2026 – Present

- Owned backend features end to end for multiple client web applications on Next.js and PostgreSQL, from schema design through production deployment.
- Cut paginated admin listing queries from 100 ms to 35 ms by replacing OFFSET pagination with keyset pagination and adding covering indexes.
- Designed and shipped 30 REST endpoints holding 45ms p95 latency under production traffic.

Center on Access Technology, RIT/NTID — Software Engineer (Part-Time)

Aug 2022 – Dec 2024

- Built TigerChat, a real-time speech-to-text captioning application in C# and .NET Core used by Deaf and hard-of-hearing students university-wide, integrating an in-house speech recognition engine into the live transcription pipeline.
- Ran 10 accessibility test cycles for PopSign, an American Sign Language learning application from Georgia Tech College of Computing and Google teams, delivering usability findings that shaped product iterations.

Ecolab — Software Engineer Intern

Jan 2024 – Aug 2024

- Processed telemetry from large fleets of connected devices into Cosmos DB through serverless pipelines built in C# on Azure Functions and Azure IoT Hub, feeding downstream analytics.
- Exposed device telemetry to firmware and platform teams through 70 REST endpoints, translating hardware data contracts into stable, versioned API schemas.
- Resolved production field failures by querying telemetry in Azure Data Explorer (KQL) and driving root-cause fixes with firmware and platform teams.

CHESS Health — Software Developer Intern

Jan 2022 – Aug 2022

- Built backend services in Express.js and ASP.NET Web API for a behavioral health platform serving patients across multiple treatment programs, integrating 55 REST endpoints across MySQL, Microsoft SQL Server, and MongoDB.
- Shipped 20 features and closed 30 tickets in the platform's Angular and React web client.

PROJECTS

AI-Powered Chinese Character Recognition & Learning System — M.S. Capstone

Jan 2025 – Dec 2025

- Reached 99.0% top-1 accuracy across 2,000 character classes by implementing a Graph Convolutional Network with agent attention in PyTorch Geometric, modeling handwriting as stroke graphs and training on the CASIA-HWDB writer-independent split.
- Shipped end-to-end inference from Apple Pencil ink to a local model on Apple M1 at 11 characters/sec and 108 ms p95, normalizing and resampling trajectories to bridge benchmark and device input without retraining.

New World — Board Game Competition Platform — B.S. Capstone

Aug 2022 – May 2023

- Led a 6-person team building a full-stack platform on Next.js and NestJS, delivering 18 features across 8 sprints.
- Supported 100 concurrent users during a live competition with no service interruptions, across 40 PostgreSQL-backed REST endpoints with JWT authentication, role-based authorization, and structured logging.

EDUCATION

Rochester Institute of Technology — Rochester, NY

M.S., Computer Science — GPA 3.49

Aug 2023 – Dec 2025

B.S., Web & Mobile Computing — GPA 3.65

Aug 2018 – May 2023