

# Allen Yu

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## Education

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Georgia Institute of Technology, MS in Computer Science

Expected Dec 2025

University of Washington, BA in Geography: Data Science

June 2023

## Projects

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**ShareNExpire.com | React, Flask, Docker, AWS(ECS, ECR, ElastiCache, S3)**

- Built a full-stack temporary file sharing platform with React frontend and Python Flask backend
- Leveraged AI for debugging and code review to ensure production ready quality
- Pushed Flask Docker image to ECR and deployed on ECS Fargate, securing backend via ALB reverse proxy
- Implemented stateless REST APIs for secure multi-part file uploads and retrieval
- Integrated S3 for file storage with Redis TTL-based metadata caching, reducing redundant S3 queries

**Report Tracker | React, Spring Boot, PostgreSQL, AWS(Elastic Beanstalk, CloudFront, RDS)**

- Built a full-stack report management tool to track 1,200+ inspection reports
- Designed and developed a React dashboard UI to visualize report status and progress
- Implemented CRUD APIs with Java Spring Boot and Hibernate to manage PostgreSQL records
- Secured backend endpoints using Spring Security and JWT for stateless authentication
- Hosted backend on EB and PostgreSQL on RDS, using CloudFront for HTTPS client-server connection

**Tune Snip | React, Flask, MongoDB, Docker, GCP(Cloud Run, Artifact Registry)**

- Built a full-stack music recognition tool supporting 18M+ songs
- Implemented Flask APIs to store and retrieve user history and recommendations using MongoDB
- Improved server response time by 44% through multithreading for parallel processing
- Containerized the Flask image on Artifact Registry and deployed on serverless Cloud Run

**Cosmic Crusaders | C#, Unity**

- Collaborated with a team of 6 to design and develop a Unity space-shooter with AI-driven enemies
- Led playtesting and qualitative research to refine game mechanics, environment, and balance
- Optimized CPU usage by 73% through object pooling, reducing allocations and deallocation overhead
- Engineered an in-game shop feature to handle purchases and unlockable upgrades

## Experience

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**Back of House Staff**, Sunright Tea Studio – Seattle, WA

Mar 2024 – Present

- Performed inventory checks and restocked ingredients while maintaining a professional attitude
- Delivered exceptional customer service consistently in a fast-paced, high-volume environment

## Skills

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**Languages:** Python, Java, JavaScript, TypeScript, HTML, CSS, C#, SQL

**Frameworks & Libraries:** React, Flask, Spring Boot, Hibernate

**Tools:** Git, Docker, PostgreSQL, MongoDB, AWS, GCP, Redis