

# Subham Kumar

Student at Northeastern University

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github.com/growlyx

## EDUCATION

- Northeastern University** Oakland, CA  
*1st Year Undergraduate Student, Sophomore Standing. GPA: 4.0/4.0 Expected Graduation: May 2028 Class of 2029*

## PROFESSIONAL EXPERIENCE

- Rule Your Own Game, Inc.** Pearland, TX (Remote)  
*Software Engineering Lead, Part-Time Jan. 2025 - Current*
  - Infrastructure:** Deployed highly available infrastructure on bare metal using Kubernetes (Helm, Agones), managing 60+ game server instances supporting 1,500+ concurrent players and 2.5M+ unique players.
  - Performance & Monitoring:** Observability using VictoriaMetrics and Grafana- integrated widely across the legacy codebase. Built automated CI/CD tooling in Kotlin & Rust to deploy content updates to all edge nodes within 2 minutes.
  - Content Modernization:** Designed an extensive Kotlin framework enabling rapid content production. Shipped rewrites of 4 major minigames in 3 months, saving thousands in development costs. Built an automated chat moderation system using OpenAI's Omni Moderation model.
  - Team Leadership:** Managed a team of 3 software engineers asynchronously, onboarded and trained 5+ engineers on a modernized codebase through 1-on-1 mentoring sessions. Designed a player queue and load-balancing frameworks enabling zero-downtime deployments.
- Fragile, Inc.** San Francisco, CA (Remote)  
*Software Engineer, Part-Time Nov. 2024 - Jan. 2025*
  - Infrastructure:** Worked on the core modular monolith TypeScript backend services and AWS cloud infrastructure that powers Fragile's hardware subscription platform (billing/logistics).
  - Frontend:** Designed and upgraded existing internal tooling used by Fragile's customer service team for enhanced productivity.
- NYU IT High Speed Research Network** Brooklyn, NY  
*Software Engineer Dec. 2022 - Dec. 2024*
  - Web Development:** Led end-to-end development of a web dashboard built in TypeScript using Next.js, actively used by NYU research scientists. Built a modern version of Corelink's dated API client for AR/VR research purposes.
  - Backend Systems:** Built a low-overhead, self-managed notification service using PostgreSQL's JSON fields for flexible schemas. Developed a device management system with self-registration, complex permission checks, and audit logging, integrated with network switch software for automated firewall management.
  - Technical Leadership:** Conducted multiple rounds of technical interviews to recruit new undergraduate and post-graduate members for the program.

## CERTIFICATIONS

- AWS Certified Machine Learning - Specialty** Amazon Web Services (AWS)  
*Issued: Sep. 2024*
- AWS Certified Solutions Architect - Associate** Amazon Web Services (AWS)  
*Issued: Sep. 2023*

## PERSONAL PROJECTS

- Mono:** Open source FTC library with state machine system, robot subsystem lifecycle management, and builder-based gamepad command system.
- Symphony:** Modern replacement to RedisBungee, a system built to achieve consensus and data synchronization on multiple Minecraft network proxies through Redis.
- Minigames:** OSS framework that Rule Your Own Game, Inc. uses for its scalable minigame infrastructure.
- Liftgate:** Open source game server deployment system, auto-scale system, and service mesh with gRPC.

## TECHNICAL SKILLS

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- **Languages:** Kotlin, Java, TypeScript, Python, Rust
- **Frameworks:** Spring Framework, Ktor, React, Next.js, gRPC, OpenCV
- **Infrastructure:** Kubernetes (Helm, Agones), AWS (Amazon Web Services), Azure, Docker, CI/CD (Jenkins, TeamCity), Nginx, Tailscale, Terraform, Consul, Nomad, Ubuntu, Debian
- **Datastores:** PostgreSQL, MongoDB, Redis, Zookeeper, DynamoDB, RDS, Apache Kafka/Spark/Flink
- **Observability:** VictoriaMetrics, Grafana, Prometheus, DataDog