

Ryan Khan

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EDUCATION

University at Buffalo (SUNY)

Computer Science/BS

Buffalo, NY

Graduated Spring '25

- **Relevant Coursework:** Applied Human Computer Interaction and Interface Design, Software Engineering Principles, Systems Programming, Computer Security, Computational Linguistics

WORK EXPERIENCE

Software Developer

September 2025 - Present

Fusion92

- Shipped a multi-tenant Chatbase AI chatbot integration within CoreCMS, enabling scalable deployments across multiple client instances with tenant-safe isolation.
- Designed and normalized SQL Server schema for chatbot configuration; implemented secure secret storage and credential handling for bot IDs/keys using encryption and least-privilege access patterns.
- Built an admin provisioning/configuration utility to create and customize tenant-specific chatbots, streamlining onboarding and reducing manual setup.
- Implemented an HMAC-based backend validation layer to validate user sessions and protect chatbot requests from tampering.
- Delivered an agent guided tour system (Shepherd.js) with CMS-managed tooltips, onboarding video logic, and restart/skip controls to improve first-time user adoption.
- Built an AI-powered E2E test failure analyzer for a Playwright suite (140+ tests), combining GPT-4o vision for screenshot analysis with a LangChain tool-calling agent (GPT-4o-mini) to investigate root causes and automate failure triage.
- Reduced manual debugging time from ~2 hours to under 5 minutes per run by generating structured, actionable reports with categorized failure attribution (test vs application).
- Architected the system as a modular Python CLI with multi-step agent workflows, Azure DevOps pipeline integration, and structured Markdown/JSON reporting (~\$0.10 per run).

Software Developer Intern

June 2025 - September 2025

Fusion92

- Collaborated cross-functionally with product and client teams to scope and deliver features in an Agile environment using Jira.
- Led redesign of the Platform Management page in CoreCMS, improving usability through new Vue 3 components and optimized UI structure.
- Validated APIs using Swagger and supported QA/release processes via Azure DevOps pipelines.

PROJECT

FailChain - AI-Powered Test Failure Analysis Tool

- Built a multi-phase pipeline to automate E2E test failure triage from test artifacts, screenshots, and logs
- Implemented failure clustering and token-aware batching to efficiently analyze large test suites
- Integrated vision models and LangChain agent workflows to classify failures and generate root-cause reports
- Designed a modular, multi-framework system with CLI tooling for easy integration into CI workflows

TECHNICAL SKILLS

Languages/Frameworks: Python, C#, JavaScript, SQL, React, Vue, Nuxt, .NET, LangChain

Tools: Git, Docker, Azure DevOps, Swagger, SSMS, Jira