

Professional History

Software Engineer | Templum Inc. | New York, NY

May 2022 - Present

Full-stack developer tasked with development of marketplace software for alternative assets. Performed tasks for marketplace wide workflows in relation to order placement, trade matching, broker-dealer operations, FINRA regulatory concerns, and onboarding workflows where concerns for know-your-customer (KYC) and anti-money-laundering (AML) regulations of high importance.

Key Accomplishments

- Developed alternative asset marketplace software utilizing:
 - DataDog • Flyway • SQL Server • PostgreSQL • .NET Core • SonarQube
 - Docker • Kubernetes • NATS JetStream • gRPC • React • ArgoCD • Azure DevOps
- Developed and maintained a micro-services based alternative assets marketplace system responsible for creating and placing trades for primary / secondary assets.
- Architected and designed UML diagrams (Lucid) to explain long running, asynchronous, and complex workflows that spanned across multiple microservices before implementation began.
- For multiple projects, I managed discussions regarding analysis of requirements, system architecture, workflows and design, and had then created, groomed, sized, and assigned tickets to myself and developers within the team.
- Utilized flyway to perform idempotent database data migrations and schema changes that were applied to both new and existing production environments.
- Created multiple versioned API's capable of initiating workflows over HTTP requests, Webhooks from third party systems, or even published JetStream messages from clients.
- Integrated our marketplace onboarding workflow with third-party providers that handled certain aspects of the KYC/AML process such as Onfido. Additionally, I handled custodian and investor information management workflows for investors through our custodian manager, DriveWealth
- Created a system that allowed investors to interact with the system via e-mails sent to them to perform one-off tasks without manual authentication, but arbitrary to be any workflow we wanted, such as entering updated information into our system or acknowledging / accepting clauses for agreements.
- Integrated with DocuSign to allow investors to sign NDAs for offerings as well as email links to users from within our system as part of the above mentioned anonymous interaction system.
- Created a suite of unit tests and integration tests that took multiple API services from below 40% code coverage to well over 90% coverage for both lines and conditions. This helped catch unforeseen edge cases as well as untranslatable query errors.
- Developed and ran performance benchmarks on parts of our software that was on the critical path for order placement and trade matching where performance and runtime was of utmost importance and required multiple levels of optimization and full unit/integration test coverage.

Lead Software Engineer | EmployerDirect Healthcare | Dallas, TX

March 2020 - May 2022

Lead full-stack developer charged with maintaining and extending internal software systems as well as architecting and developing an external facing mobile application to communicate with internal systems in a robust and scalable fashion.

Key Accomplishments

- Developed an internal web-app utilizing:
 - .NET Core • Angular • Azure FunctionApps • Azure MessageBuses • LogicApps • SQL Server
- Developed an external mobile-application utilizing:
 - .NET Core • Azure FunctionApps • Azure MessageBuses • React-Native • SQL Server
- Developed and maintained our client payment system as well as PDF generation for client invoicing.
- Integrated NICE inContact into our web-application to increase call center productivity.
- Restructured the Unit/Integration testing for API/UI for reuse with all internal applications.
- Generated private netstandard2.* NuGet packages for code reusability between our internal and external codebases.
- Developed and shared PowerShell scripts/profiles with the team in order to increase productivity / quickly onboard.
- Set standards on release documentation, branch management, and pull-request quality.
- Developed 500+ UI/API unit/integration tests, aiding in release confidence.
- Developed YAML CI/CD and release pipelines for various application services.
- Migrated multiple applications from .NET Core 2.* → .NET Core 6.* and .NET Core 3.* → .NET Core 6.*
- Incepted large features from: DB architecture → API development → UI design → Implementation.

Java web application developer developing the first live in production blockchain based syndicated lending system, called Fusion LenderComm, to act as an extension from any of our clients' loan servicing systems.

Key Accomplishments

- Developed web applications and integrations utilizing:
 - Java • ActiveMQ • Tomcat • LoanIQ • Corda • Springboot
- Trained a team of nine in Bengaluru, India on development, DevOps, and QA testing.
- Utilized PuTTY/FileZilla to SSH into test/UAT servers for environment configuration and debugging.
- Worked closely with large banks during development and delivered patches during the UAT phases.
- Actively performed application support with clients through direct contact and logs.
- Developed Azure pipelines and setup Azure agents for integration testing with various client configurations.
- Utilized Docker to generate portable containers for use in proof of concept demos to attract potential clients.
- LIQ Script creation (XQuery), trigger management, LIQ database manipulation, dictionary traversal, and object exploration for data retrieval and consumption from LIQ.

Software engineer developing AR/VR/MR/XR, Artificial Intelligence, and WebForm related software.

Key Accomplishments

- Developed web data entry forms utilizing JSON schemas, C# reflection, and C# interfaces.
- Implementation of AR/VR/MR/XR software for use with the Microsoft HoloLens.
- Modified Bootstrap, Handlebars, Alpaca, and Angular JS libraries from source in order to generate ASPX forms.
- Conducted R&D based tasks for various projects yielding extremely successful results.
- Managed sprint planning and backlog task creation. Delivered detailed reports on sprint task completion and task obstacles.
- Front-end and back-end web development. Created restful API's using C# as a backend. Used HTML and JQuery for front end development.
- Implemented error checking with unit tests and API error logging via ELMA.
- Developed mobile applications implementing Xamarin that would run on iOS, Android, or Windows, and communicated with published Azure WebAPI's.
- Created efficient patent-pending algorithms to convert volumetric medical data to pointcloud data.

Personal Projects

- Personally created video game demos available, reach out for further information
- Developed a professional quality game from scratch utilizing the Godot engine as part of a group project in a class at UTA. The project can be found on my github as CSE-4392-CSE-5392-Game-Project
- Developed personal graphics library for the PlayStation Vita and ARM target systems.
 - Written in C++, in order to familiarize myself with memory management techniques, such as pointer dereferencing, obtaining addresses and manipulating data remotely, as well as nested pointer lists. Provided an extensive lesson into memory management.
 - Purely self-taught. Issues were solved as they were found.
 - Wrote detailed documentation. Documented all work and open-sourced for the benefit of others.
 - Created debug consoles to view data on target system.
- Developed video game remakes for PCs and x86 target systems.
 - Used C# and WPF in order to do rendering. Focused on game logic more than graphics logic.
 - Developed a reusable and generic map editor which stores map data in JSON format for easy storage/retrieval/saving/loading.
 - Developing a collision detection system using old methodologies implemented in older consoles such as the SNES or Sega Genesis
 - Developing a sprite animation system that uses keyframes obtained through image data.

Certifications

Name	Authority	Achievement Date	Expiration Date
Microsoft Office Specialist	Certiport	March 28 th , 2014	Does not expire
Responsive Web Design	FreeCodeCamp	October 13 th , 2018	Does not expire
APIs and Microservices	FreeCodeCamp	November 2 nd , 2018	Does not expire
JavaScript Algorithms and Data Structures	FreeCodeCamp	October 12 th , 2018	Does not expire
Front End Libraries	FreeCodeCamp	October 16 th , 2018	Does not expire
Corda Certified Developer	R3	September 25 th , 2019	Does not expire

Education

University of Texas at Arlington | 2016 - 2018

Bachelor of Science - Computer Science

Key Accomplishments

- Wrote a compiler for a language given grammar specifications by the professor.
- Created a TCP/IP client/server based chat protocol combining multiple libraries seamlessly.
- Developed a HoloLens virtual reality application for viewing volumetric medical data.
- Graduated with a cumulative GPA of 3.92. Major GPA of 4.0.

Northlake College | 2014 - 2016

Associate of Science

Key Accomplishments

- Graduated with a cumulative GPA of 4.0.