
EMPLOYMENT

Senior Software Engineer **RSM US** **December 2015 - Present**

CLEARthru (www.rsmus.com/clearthru): Traceability solution built on blockchain technology

- Architected frameworks and services for integrating D365FO to HyperLedger Fabric BlockChain, RSM's CLEARthru product trace service, and IBM FoodTrust.
- Developed service to route API calls based on destination, allowed a single endpoint to route to multiple internal or external blockchain networks.
- Designed and implemented chaincode in Node.js for the Hyperledger Fabric Blockchain to respond to changes in the ledger and trigger events based on those changes.

Technology Experience Center (www.rsmus.com/tec): Showcase of different technologies for intelligent retail

- Architected a product locator system for Retail Stores, using an ESP32 microcontroller, Azure ServiceBus queue, and a PowerApp to turn on LED lights to indicate where a product is located in an aisle.
- Developed a frictionless checkout system using an ESP32 and RFID reader to send RFID EPCs to a customized CloudPOS form.
- Utilized knowledge of C#, X++, C++, embedded devices, JTAG/SWD, and git to quickly prototype, debug, test, and deliver solutions to complex business requirements.

RoboCart: Autonomous Shopping Cart Prototype

- Designed and implemented an autonomous shopping cart utilizing an ESP32 microcontroller, a DWM1000 Ultra-wideband listener connected via I2C protocol to calculate position, and an LSM9DS1 compass to calculate heading to follow a customer around a retail store.
- Implemented an indoor positioning system using DWM1000 Ultra-wideband modules.
- Implemented an algorithm to calculate the shortest route from the carts current location to an item in the store.

Application Development: Provided clients with custom software solutions for their business needs

- Customized Dynamics 365 Cloud POS and MPOS for client specific requirements.
- Implemented custom credit card processors for D365FO Call Center and POS.
- Architected D365FO integration with local hardware using WebSockets and Windows Service.
- Mentored junior engineers on developing customizations for D365 Commerce.

Senior Architect **Junction Solutions** **July 2006 - December 2015**

Wireless Warehouse: Realtime browser based warehouse management system for Dynamics AX

- Architected full stack solution including integration with Dynamics AX.
- Developed C# and X++ code generator and SDK to facilitate easy communication with Dynamics AX using the .NET Business Connector (AX v4 & 2009) and AIF (AX 2012).
- Utilized knowledge of HTML and JavaScript to run efficiently on resource constrained devices.

Application Development:

- Developed Windows 8 Mobile applications for operations such as receiving and picking.
- Developed integrations for systems and hardware such as point of sale, scales, warehouse conveyor systems, and manufacturing equipment.

PROJECTS

MoScenes: Developed an iOS application to control WeMo brand smart home devices over a local network.

Oh Yeah!: Created an iOS application that used GPS and push notifications to manage todo lists.

Languages and Technologies

C#, JavaScript, TypeScript, Node.JS, X++, C++, HTML, Swift, Objective-C

Visual Studio, Visual Studio Code, Dynamics 365, Dynamics AX, Microsoft SQL Server, XCode, git, UIKit, CocoaTouch, Interface Builder, Arduino