

Thomas S. Ruby

309-255-6801 • tom@tomruby.com • www.linkedin.com/in/thomasruby

Talented Developer with MSCS degree and extensive experience In software and hardware Implementations

Innovative software and hardware developer, experienced in analysis, design, development, testing, and implementation of diverse stand-alone and embedded database systems and applications programs. Productive in team-based and self-managed projects.

Areas of Expertise

- Software** Microsoft SQL and Office, Windows, C, C#, & Embedded C, Web HTML, ASP.NET & CSS, Encryption, Visual Studio, Selenium, Sauce Labs, Software Testing
- Hardware** AVR Microcontroller, Arduino Microcontroller, ARM Microcontroller, RF data communication, Particle Electron. Circuit and PC board design.

Professional Experience

Developer at ABB

April 2019 to Present

- Responsible for software testing
- Using C#, SQL, Selenium and Sauce Labs for software testing

Independent Contract Developer

2014 to Present

- Temperature monitoring system to provide status messages using SMS in C++ with lots of web code in C# ASP.NET
- Developed web programs for a convention to process guest registration and to support vendors' purchasing and reserving booth spaces using C# ASP.NET, Javascript and Microsoft SQL
- Designed, developed, and wrote a three-article series for Garden Railways Magazine that used Arduino microcontrollers to provide automation that detected train location and direction, and operated a three LED color signal bridge and automatic crossing gates using C++
- Designed, built, and developed the C software for a radio and processor controlled outdoor model railroad system
- Designed, built, and programmed a timer for a Volcano display with a customizable eruption schedule. Discovered a new manufacturer's bug in the controller

Programmer at AHT Services

2014

- Maintained and updated Microsoft SQL and Clarion database software

Independent Contract Developer

2012 to 2013

- Designed a custom model railroad control system with color TFT displays. Developed a working odometer for an outdoor model railroad
- Designed and programmed a custom Android delivery driver system that downloaded daily routes and orders, and uploaded sales at the end of the day. Encrypted all data for confidentiality
- Created and maintained the midwestrails.org website

Director of Development at Crescent System

2006 to 2012

- Designed and implemented the new version of Crescent's flagship product featuring Point-of-Sale (POS) peripherals, credit card integration, multi-site operation, internet communications, and SQL Replication in MS SQL
- Used C#-based reporting and credit card processing systems to interface to the Clarion accounting, POS, restaurant manager, and tee booking programs using SOAP Requests
- Designed and developed the user interface
- Developed the database table structure, test vs production database structure comparison, and automated the table structure updating

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Independent Contractor

1995 to 2006

- Developed a food manufacturer's inventory system to track shipping destination of received product lots
- Published a five-article series describing how to use relational calculus to simplify code and describing the benefits of each of the five database Normal Forms for *Clarion Magazine*
- Designed and developed a web store database and a web interface that scraped suppliers' on hand lists to indicate whether the product was on-hand or not available
- Designed and implemented a replacement temperature controller for a thermoset plastic oven in AVR assembly
- Wrote a Sybase SQL record management program for physician education information and certification services with a large record database and installed it on a pair of off-the-shelf NT computers
- Developed a warehousing program and hardware system to track products by floor location, pallet, and age. The system utilized an RF LAN, forklift-mounted laser barcode readers, a local workstation
- Wrote individual order entry, forklift, palletizing, and warehouse management programs
- Created a Less-Than-Truckload (LTL) and Over-the-Road (OTR) routing and dispatch program in conjunction with non-GPS routing program to optimize routes, mileage, and time calculations
- Wrote a Modula II warehouse inventory program and RS-232 communications for DOS handheld computer
- Created a Point-of-Sale system for gift shops

Education

Master of Science in Computer Science

Western Illinois University, Macomb, IL

Bachelor of Science in Computer Science

Western Illinois University, Macomb, IL

Associate of Applied Science in Electronic Technology

Highland Community College, Freeport, IL