

# Richard Seroka

Over thirty years of system software engineering experience with a proven track record of delivering solutions to users on time while meeting or exceeding expectations of quality and features.

## EXPERIENCE

### Crestron Electronics, Rockleigh, NJ

*Principal Systems Architect* MAY 2017 - JUNE 2022

- Architected Crestron's User Interface Framework and visual components that allow HTML 5 Web applications to run on proprietary embedded processor touchscreen, iOS/iPadOS devices, and web browsers that communicate via binary protocols with Crestron equipment. The system included hybrid browser/mobile apps on iOS and Android using Java/Swift/C++ for communication to Crestron equipment and HTML5 Custom Elements as Web Components for User Interface. Crestron released the effort on github as Crestron/CH5ComponentLibrary
- Architected Crestron's scheduling application that runs on proprietary embedded processor touchscreens and communicates with MS O365, MS Exchange, Google Calendar and Crestron proprietary calendar applications. The system included a hybrid browser app on Android using Java/C++ for communications to calendar providers and HTML/Angular as Application Framework for User Interface.
- Served as Technical Project Lead on many projects. In this role I acted as liaison between product management, project management, multiple software development groups, and quality assurance. This role included creating technical specifications, review of design and test plans, bug triage and prioritization and release approval.
- Educated customers as lead content provider and lead instructor in the HTML5 for Crestron Devices classes at Crestron Masters events. The classes at these events provide training to third party Crestron Certified Programmers for best practices to create custom user interfaces for Crestron touchscreens
- Provided training and mentoring to other software architects on the team and lead software developers in other groups throughout the company
- Acted as the primary company interface to external software consulting companies. This role included creating software technical specifications, requests for proposals, review of proposals, contract negotiations, review of change proposals, and review of completed work.

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## SKILLS

Expertise in design and implementation of real time, asynchronous, event-driven applications and systems

Management of software development teams to meet project goals for quality and timeliness

Ability to gather and analyze business requirements and constraints from stakeholders, end users, and developers of interfacing systems

Proficiency in communicating technical designs with UML class, collaboration and sequence diagrams

Implementation of intricate security policies for Web based applications including OAuth, JWT and HMAC

Effective trainer and teacher to junior and learning developers

## COMPUTER LANGUAGE SKILLS

JavaScript/TypeScript, Node.js, HTML, CSS/SASS, React

Java, JNI, and C++

Python, Perl, Bash/Shell Scripting

SQL Server, Sybase, Oracle sql and stored procedures

EXPERIENCE (continued)

**Crestron Electronics, Rockleigh, NJ (continued)**

**Senior Software Manager** MARCH 2012 - MAY 2017

- Managed a team of 5 to 12 developers to enhance and maintain a User Interface Framework and visual components written in ECMA-based AS3 computer language running on Adobe Flash/AIR platforms on proprietary embedded processor touchscreen, iOS/iPadOS devices, and web browsers that communicate via binary protocols with Crestron equipment.
- Held responsibility of hiring and training entry level and experienced software developers for the team.

**Morgan Stanley, New York, NY**

**Vice President** JANUARY 2003 - MARCH 2012

Interest Rate Derivatives

- Served as regional software development manager and developer for the Interest Rate Derivative risk reporting and profit and loss attribution calculation system. The system included C# User Interfaces accessing Java language on Linux services.
- Managed a team of 5 developers building a Trade Entry and Life Cycle Events Management system for Interest Rate Derivative products. The system included C# User Interfaces accessing Java services. Features include:
  - Trade Entry
  - Interactive Pricing
  - Life cycle events such as cancel/correct, allocations, assignments, step-in, and unwinds
  - Interoperability with legacy trade entry, valuation, sales, confirmation and payment systems
- Developed feature enhancements and bug fixes on the risk calculator system
- Managed a team of two developers in development, production release and maintenance of an Interest Rate Derivative Trade asynchronous Publisher and SOAP service that supplied trade indicative information of IR Swaps, Swaptions, FRAs, Caps/Floors, and Cancelable Swaps to many interested internal and external parties within the firm. The system was built using database triggers communicating asynchronously with C++ servers that transformed the data to a FpML like XML format

Credit Derivatives

- Managed a team of three developers in the development, enhancement and support of a Credit Event calculation and reporting system. The calculation is implemented as C++ batch processes that on a nightly basis calculates the firms Credit Events transactions based upon market data retrieved from Markit.com and Intex. Reports are generated in excel format.

PATENTS

Clean Video Switch Among  
Multiple Video Feeds in a  
Security System

Issued December 1, 2020

10,855,730

## EDUCATION

**Rensselaer Polytechnic Institute**, Troy, NY  
Bachelor of Science - Computer and Systems Engineering  
Minor - Management

## PROJECTS

### **Full-stack Development Project** FEBRUARY 2023 - PRESENT

Designed, developed, tested and deployed a web application. The application is developed in Typescript with React Client and Express Node.js webserver. The application is deployed as a Docker container on AWS as <http://richardseroka.com>. A fuller description and complete source code available at <https://github.com/RSeroka/fullstack-ts>

### **Volunteer Teacher Assistant — TEALS** OCTOBER 2019 - MAY 2023

Assisted/Mentored High School teachers in the Newark and North Bergen Public Schools in Introduction to Computer Science (Snap!) and Advanced Placement (college level) Computer Science A (Java) classes

### **Volunteer Income Tax Assistance — VITA** FEBRUARY 2023 - PRESENT

Prepared and filed Federal and State income tax returns for seniors and low-income earners as part of the IRS's Volunteer Income Tax Assistance with the Bergen Volunteers service ([bergenvolunteers.org](http://bergenvolunteers.org))