

I am a software engineer with over 20 years of experience designing and implementing software solutions. I am committed to leveraging software to solve problems and improve processes.

Skills

- **Languages:** C#, C++, C++/CLI, Java, Dart, JavaScript, TypeScript, Python
- **Technologies:** .NET, ASP.NET Core, Flutter, WPF/MVVM, SQL, Vue, Angular, MSCRM, AWS, Azure, REST, WCF, Web Components (LitElement), Protobuf, HTML, CSS, SCSS, Three.js, Reactive Extensions(Rx), SignalR/Web Sockets, CodedUI/UIA, PowerOn/SymXchange
- **Other:** Data structures, OOD/OOP, SOLID, relational databases, industrial automation (OPC/UA), motion control (ACS, Copley, Maxon), machine vision (VisionPro, OpenCV), UI automation, unit testing, CI/CD

Professional Experience

Principal Software Engineer Software	NOVO Engineering Vista, CA	Feb 2018–Present
<ul style="list-style-type: none">• Wrote an internal resource tracking application using a Flutter front-end with an ASP.NET Core back-end• Developed a collision detection feature that allows surgeons to visualize and avoid collisions between a patient's spinal anatomy and surgical hardware while developing screw plans for spinal surgeries. Improved patient safety and surgeon confidence in screw plans• Enhanced C# image processing/machine vision features used by an automation robot to leverage parallelism which drastically increased product performance• Added transient fault handling to a robot product which prevented costly workflow disruptions• Built HMI software for various robotics projects using both thick & thin client applications• Provided software architecture and development for various client projects• Created an imaging segmentation routine used to differentiate various aspects of plant-callus anatomy• Integrated a client's production robot software with PAC via OPC/UA• Produced various web components using LitElement• Promoted from Senior Software Engineer to Principal Software Engineer• Mentored junior engineers		
Software Engineer Advisory UI/UX Group	Symitar (Jack Henry & Associates) San Diego, CA	Mar 2012–Feb 2018
<ul style="list-style-type: none">• Developed product features for Symitar's flagship product, Episys Quest• Designed and implemented an encrypted flight recorder for use in postmortem debugging of Symitar software• Implemented a custom automation API using WCF that allowed automation frameworks like CodeUI to drive the product GUI which resulted in extreme increases to test automation speed• Designed and implemented a test automation framework that allowed dynamic tests to be written in XML. Allowed for the creation of 25K+ automation tests in a 12-month period• Brought software engineering best practices to the automation team during an 18 month volunteer engagement• Co-authored managed-coding standards and unit testing best practices for the UX group• Promoted from Senior Software Engineer to Software Engineer Advisory• Received employee of the quarter in Dec 2017		

Senior Consultant

Software

Hitachi Solutions

Irvine, CA

Jul 2011-Mar 2012

- Created a validation tool in MSCRM that allowed a client to verify customer and product information, real-time, against their MSAX-ERP system. Turned a time consuming, multi-step, manual process into an automated near instantaneous one
- Built a deal flow/pipeline tracking tool that could be installed as a module in any MSCRM instance. Allowed administrators to define workflows for end users to follow and interact with via a GUI ribbon. User interactions were captured and used to drive subsequent workflow

Senior Software Engineer

Software

Order One Software

San Diego, CA

Jul 2004–Jul 2013

- Produced an XML driven user interface engine written in C# that allowed a client to rapidly produce custom web form mash-ups of MSCRM fields from disparate entities. Permitted the client to visualize data in ways not otherwise supported in MSCRM
- Created a CD based (no install footprint) application in MFC/C++ for testing medical hardware. Used on the production floor of a Fortune 500 corporation
- Implemented a photo kiosk application in .NET with card reader integration, image processing, and custom form controls
- Developed a financial calculator used by a client to rapidly prototype and visualize the various financial aspects of property leases

Software Contractor

Independent

Multiple Companies

San Diego, CA

Jul 2000-Jul 2004

- During this period, I held various full-time and contract positions developing web and desktop applications
- Taught a course at Learning Tree University called Advanced Web Animation in Flash: Interactivity with Actionscript

Education

- **BA ICAM (Interdisciplinary Computing and the Arts Major)**, University of California San Diego, San Diego **2001**
- **Relevant Coursework:** Computer science, series of science and engineering calculus courses, computer-generated art (created a fractal generator in Lingo), game programming (wrote a version of the classic Space Invaders game)

Extracurricular

- Certified-Intermediate AYSO Referee