

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

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- **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

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<b>Principal Software Engineer</b> Software	<b>NOVO Engineering</b> Vista, CA	<b>Feb 2018–Present</b>
<ul style="list-style-type: none"><li>• Wrote an internal resource tracking application using a Flutter front-end with an ASP.NET Core back-end</li><li>• 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</li><li>• Enhanced C# image processing/machine vision features used by an automation robot to leverage parallelism which drastically increased product performance</li><li>• Added transient fault handling to a robot product which prevented costly workflow disruptions</li><li>• Built HMI software for various robotics projects using both thick &amp; thin client applications</li><li>• Provided software architecture and development for various client projects</li><li>• Created an imaging segmentation routine used to differentiate various aspects of plant-callus anatomy</li><li>• Integrated a client's production robot software with PAC via OPC/UA</li><li>• Produced various web components using LitElement</li><li>• Promoted from Senior Software Engineer to Principal Software Engineer</li><li>• Mentored junior engineers</li></ul>		
<b>Software Engineer Advisory</b> UI/UX Group	<b>Symitar (Jack Henry &amp; Associates)</b> San Diego, CA	<b>Mar 2012–Feb 2018</b>
<ul style="list-style-type: none"><li>• Developed product features for Symitar's flagship product, Episys Quest</li><li>• Designed and implemented an encrypted flight recorder for use in postmortem debugging of Symitar software</li><li>• 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</li><li>• 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</li><li>• Brought software engineering best practices to the automation team during an 18 month volunteer engagement</li><li>• Co-authored managed-coding standards and unit testing best practices for the UX group</li><li>• Promoted from Senior Software Engineer to Software Engineer Advisory</li><li>• Received employee of the quarter in Dec 2017</li></ul>		

**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**

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- **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**

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- Certified-Intermediate AYSO Referee