

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	NOVO Engineering - Vista, CA	Feb 2018-Present
<ul style="list-style-type: none">• Wrote an internal resource tracking application to replace a manual Excel process. Used 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 planning 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 numerous web components using LitElement• Promoted from Senior Software Engineer to Principal Software Engineer• Mentored junior engineers		
Software Engineer Advisory	Symitar (JHA) - 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 enabled 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 tests to be written in XML. Lead to 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**Hitachi Solutions - Irvine, CA****Jul 2011-Mar 2012**

- Created a validation tool in MSCRM that facilitated the verification of client customer/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. Enabled the definition of workflows for end users to follow and interact with via a GUI ribbon. User interactions were captured and used to drive subsequent workflow and track deal flow progress.

Senior Software Engineer**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**Multiple Companies - 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

Extracurricular

- Certified-Intermediate AYSO Referee