

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. Leveraged a Flutter front-end with an ASP.NET Core back-end• Improved patient safety and surgeon confidence by creating 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.• Drastically increased software performance of an automation robot by parallelizing existing image processing routines• Prevented costly workflow disruptions by adding transient fault handling to an automation robot• 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 that differentiated various aspects of plant-callus anatomy• Integrated a client's production robot software with PAC via OPC/UA• Produced numerous web components• 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• Responsible for extreme increases to test automation speed by adding a custom automation API that enabled automation frameworks to drive the product GUI• Authored an XML-based test automation framework which led 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
<ul style="list-style-type: none">• Converted a manual, multi-step, validation process into an automated, near-instantaneous, one by creating/exposing an AX web service to an MSCRM instance that validated customer/product information• Built an MSCRM deal flow/pipeline tracking module which enabled enterprises to define workflows for end users to follow/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. Deployed on the production floor of a Fortune 500 corporation
- Made a photo kiosk application in .NET with card reader integration, image processing, and custom form controls
- Developed a financial calculator utilized by a client to rapidly prototype and visualize the various financial aspects of property leases

Education

- **BA ICAM (Interdisciplinary Computing and the Arts Major)**, University of California San Diego, San Diego

Volunteer

- Certified-Intermediate AYSO Referee