

Skills

- **Languages:** C#, C++, C++/CLI, Java, Dart, JavaScript, TypeScript, Python
- **Technologies:** .NET, ASP.NET Core, Flutter, WPF/MVVM, SQL, Entity Framework, Vue, Angular, MSCRM, AWS, Azure, REST, WCF, Web Components (LitElement), Protobuf, JSON, 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 a resource tracking application to replace an internal/manual Excel process. Leveraged a Flutter front-end with an ASP.NET Core back-end. Streamlined an existing process, added data integrity, facilitated multiple contributors and introduced a potential revenue stream via a licensable application.• 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.• Increased the software performance of an automation robot by ~50% by parallelizing existing image processing routines.• Prevented costly workflow disruptions by adding transient fault handling to an automation robot. Eliminated multi-minute reboot sequences.• Built HMI software for 4+ 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 which automated a potentially error prone, manual, process.• Integrated a client's production robot software with PAC via OPC/UA. Closed the loop between the client's production floor and their back-end automation controller.• Produced ~one dozen 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 UI/UX and SSO features for Symitar's flagship product, Episys Quest. Quest is a teller-facing application used in credit unions across the United States to process financial transactions.• Designed and implemented an encrypted flight recorder for use in postmortem debugging of Symitar software.• Responsible for substantial increases to test automation speed by adding a custom automation API that enabled automation frameworks to drive the product GUI. Resulted in sub-second automation routines compared to their multi-second legacy counterparts.• 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. Resulted in improved processes including code reviews, application of coding standards and SOLID principles.• 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 web service in a client's ERP system (MSAX) for validating customer & product information from an MSCRM instance. Resulted in the conversion of a slow-manual process into a sub-second automated process.
- 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. Enabled 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 Work

- Certified-Intermediate AYSO Referee