

## 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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Principal Software Engineer	NOVO Engineering - Vista, CA	Feb 2018 - Present
<ul style="list-style-type: none"><li>• 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.</li><li>• 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.</li><li>• Increased the software performance of an automation robot by ~50% by parallelizing existing image processing routines.</li><li>• Prevented costly workflow disruptions by adding transient fault handling to an automation robot.</li><li>• Built HMI software for ~4 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 that differentiated various aspects of plant-callus anatomy which automated a potentially error prone, manual, process.</li><li>• 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.</li><li>• Produced ~one dozen web components.</li><li>• Promoted from Senior Software Engineer to Principal Software Engineer.</li><li>• Mentored junior engineers.</li></ul>		
Software Engineer Advisory	Symitar (JHA) - San Diego, CA	Mar 2012 - Feb 2018
<ul style="list-style-type: none"><li>• Developed UI/UX and SSO 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>• 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-seconds automation routines vs legacy, multi-second, routines.</li><li>• Authored an XML-based test automation framework which led to 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. Resulted in improved processes including code reviews, application of coding standards and SOLID principles.</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****Hitachi Solutions - Irvine, CA****Jul 2011 - Mar 2012**

- Converted a manual, multi-step, validation process into an automated, near-instantaneous process 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. 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**

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

**Volunteer**

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- Certified-Intermediate AYSO Referee