

## Skills

---

- **Languages:** C#, C++, C++/CLI, Java, Dart, JavaScript, TypeScript, Python
- **Technologies:** .NET, ASP.NET Core, Flutter, WPF/MVVM, MSSQL, SQLite, Entity Framework, Vue, Angular, MSCRM/Dynamics 365, AWS, Azure, REST, WCF, Web Components (LitElement), Protobuf, JSON, HTML, CSS, SCSS, jQuery, 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, IIS, UML

## Professional Experience

---

### Principal Software Engineer

### NOVO Engineering - Vista, CA

Feb 2018 - Present

- 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

- 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