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Diligent software engineering professional with over 20 years of experience in designing and implementing software solutions. Skilled in object-oriented programming, web/desktop development and database technologies. Dedicated to leveraging software to solve problems and improve processes.

EXPERIENCE

FEB '18 - PRESENT

Principal Software Engineer | NOVO Engineering, Vista, CA

- Developed a collision detection feature that allows surgeons to visualize and avoid collisions between a patient's spinal anatomy and surgical hardware while developing screw plans 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
- Provided software architecture and development for various client projects
- Built HMI software for various robotics projects using both thick & thin client applications
- Added transient fault handling to a robot product which prevented costly workflow disruptions
- 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 various web components using LitElement
- Balanced simultaneous client workloads
- Promoted from Senior Software Engineer to Principal Software Engineer

MAR '12 - FEB '18

Software Engineer Advisory | Symitar (Jack Henry & Associates), San Diego, CA

- Developed product features for Symitar's flagship product, Episys Quest
- Performed unit testing and automation testing
- Resolved product defects
- Designed and implemented an encrypted flight recorder for use in postmortem debugging of Symitar software
- Brought software engineering best practices to the automation team during an 18 month volunteer engagement
- Implemented a custom automation API using WCF that allowed automation frameworks like CodeUI to drive the product GUI. This resulted in extreme increases to test automation speed
- Designed and implemented a test automation framework that allowed dynamic tests to be written in XML. Allowed for the creation of 25K+ automation tests in a 12-month period
- 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

JUL '04 - JUL '13

Senior Software Engineer | Order One Software, San Diego, CA

- 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

JUL '11 - MAR '12

Senior Consultant | Hitachi Solutions, Irvine, CA

- Created a validation tool in MSCRM that allowed a client to verify customer and 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. Allowed administrators to define workflows for end users to follow and interact with via a GUI ribbon. User interactions were captured and used to drive subsequent workflow

JUL '00 - JUL '04

Software Contractor | Multiple Companies, San Diego, CA

- 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

JUN '01

BA, Interdisciplinary Computing and the Arts Major

University of California San Diego, San Diego

Relevant Coursework

Computer science

Series of science and engineering calculus courses

Computer-generated art (created a fractal generator in Lingo)

Game programming (wrote a version of the classic Space Invaders game)

SKILLS

.NET

C#

WPF

ASP.NET

SQL

TypeScript

JavaScript

HTML

CSS

SCSS

SOLID

OOP

OOD

C++/CLI

Java

Python

Flutter/Dart

MVVM

WinForms

SignalR/Web Sockets

Reactive Extensions (Rx)

AngularJS

Vue.js

Three.js

Industrial Automation (PAC, MES, OPC/UA)

Motion Control (ACS, Copley, Maxon)

MSCRM

PowerOn

SymXchange	PowerShell	AWS	Azure	OpenCV	VisionPro	Windows Services		
Web Services	REST	WCF	Web Components		LitElement	GRPC	Protobuf	FBE
Unit Testing	CI/CD	UI Automation		CodedUI	UIA	Agile	Front-end	Back-end