

# Sachin Sharma

LEAD DEVELOPER

## SKILLS

PLURALSIGHT IQ

C#



c#

SQL



tsql

JavaScript



javascript

C++



c++

CAD API (SolidWorks), C++ (MFC), COM

C#.NET - Windows Forms, WPF(MVVM)

ASP.NET - Web Forms, MVC

Web Services - WCF, Web API, SignalR

Cloud Development (Azure)

Design Patterns (SOLID, MVVM & IOC)

## PROJECTS

### StructureWorks BIM

*Industry Foundation Classes (IFC) Export/Import Add-In over SolidWorks*

**Technologies:** StructureWorks (Product for Precast Construction Companies), C++/VC++ (MFC), C#, WPF-MVVM, SQL Server, SolidWorks, MVVM, SOLID principles, Inversion of Control (IOC), IFC2x3 TC1 specification

- Architect/Design the solution
- Developed core algorithm to export the CAD model
- Developed our own IFC serializer.
- Automated build verification testing and implemented Continuous Integration using TFS
- Created Deployment Package using InstallShield.

### StructureWorks

*Add-in over SolidWorks catering to precast construction industry. It supports modelling, engineering and drawing workflow.*

**Technologies:** CAD Programming - SolidWorks API, C++/VC++ (MFC), Net/C#, SQL Server, InstallShield, Win Form, WPF (MVVM), WCF

- StWpcEnterprise Menu Customization: Provided user ability to rearrange and configure software menu system
- Job Manager: Implemented common user interface for different managers inside application to access job specific data
- Custom Query creation: Provided user interface to create new custom SQL query and deliver support to view result
- Customer Extensibility Support - Custom Action: Created framework to enable advance user in implementing its own functionality and integrating with StructureWorks menu system
- Composite Product: Enhanced the existing application framework to support new product development inside StructureWorks
- Copy Registration: Provided user the flexibility of copying registration of already existing registration information in database and SolidWorks with a fresh name
- Fabricator Save Provided user the option to copy fabricator related data and facilitate in copying SolidWorks files and database information with a new name
- Connection Automatic Picking – Connection insertion selected the automatic participants for mating/external references based on connection registration.
- Installer Creation: Created a new installer for every service pack and major release using InstallShield
- Porting/Migration: Supported fabricator/job export & import and migration for every service pack or major release with the help of Data Transformation Services of SQL Server
- Job Level Design Marks: Enabled in creating and assigning job specific design marks which could be edited independently without affecting fabricator level design marks
- Block Out/Pocket Dimensioning: Enabled in dimensioning pockets, blocking out concrete part and identifying Block-Out and Pockets based on same geometry and orientation

## PROJECTS (CONTINUED ...)

### StructureWorks (continued ...)

- Library Edit Registration: Provided option to edit connection registered in the library and enable user to set new mating planes, add / remove embed from different configurations
- Link Connections: Created SolidWorks property page to allow user to select the existing master connection and update links with appropriate product level connection
- Drawing Module Migration for StWpcEnterprise: Created a drawing from production assembly and changed legacy framework to support configurations
- Installer Creation for StWpcEnterprise: Migrated the existing installer for StWpcEnterprise, supported .Net assembly registration, SQL Server 2005 and Named instances

### StructureWorks 64-bit Porting for Legacy Code Base with over 1 million lines of code

*Technologies: StructureWorks (Product for Precast Construction Companies)*

- Converted 32-bit dynamic libraries (dll) in C++ with MFC including 32-bit Third-Party dependencies
- Developed deployment package in InstallShield for 64-bit platform

### PieceTracker Erection Scheduling Work Bench

*Technologies: C#, ASP.Net, Signal R, JavaScript, jQuery, AJAX, SQL Server*

Provided web interface for senior management to track the real time progress updates about erection pieces and schedule. Web interface was designed using latest *Kendo Grid UI* and *Single Page Application* framework to provide high quality user experience. The challenging part was replacing existing Active-X windows control without sacrificing load time and scrolling experience.

### StructureWorks Collaboration

*Technologies: SolidWorks API, C#.Net, WPF-MVVM, Signal R and SQL Server*

Designing and implementing product data management system for StructureWorks. System will provide ability to user to work locally with SolidWorks files for better performance and notification service which will allow them to receive alerts in real-time.

### PieceTracker Document Manager

*Technologies: C#, ASP.Net, JavaScript, jQuery, SQL Server*

Provided aesthetically pleasing web interface to browse and download all documents related to identical set of pieces. Document Manager groups the various documents into top level folders which can be drilled down to access individual document.

### PieceTracker Coordination View

*Technologies: C#, ASP.Net, JavaScript, SQL Server*

Provided web interface for design department to coordinate different trades and make sure drawings are only released after all coordination activities are completed.

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## PROJECTS (CONTINUED ...)

### StructureWorks Licensing Subscription Service

*Technologies: StructureWorks (Product for Precast Construction Companies), C#, C++, Cryptography, WPF-MVVM, SQL Server, SolidWorks, WCF, Azure VM, InstallShield, ASP.NET MVC, Kendo UI & IIS Deployment.*

- Architect/Design the licensing solution which includes –
  - a. License authoring & maintenance website.
  - b. Subscription website.
  - c. Windows .Net Licensing Service.
  - d. WCF Licensing Service.
  - e. Deployment support using InstallShield.
- Designed the SQL Server database schema
- Automated build verification testing and implemented Continuous Integration using TFS
- Implemented licensing core algorithm using Cryptography/Win32 API's.
- Testing and deployment of websites and WCF services.

### Piece Tracker (Precast Piece Tracking System)

*Technologies: StructureWorks (Product for Precast Construction Companies)*

- PT Installer Creation: Created new installer for installing & configuring website for Piece Tracker  
*Technology used: InstallShield*
- SmartGrid Installer Creation: Created new installer for installing PT Smart Grid & configuring to use WCF service for Piece Tracker  
*Technology used: InstallShield*
- PT Licensing and Security: Implemented installer side licensing & authentication, designed and developed security system for user authentication, managed simultaneous login of users  
*Technologies used: C#, ASP.NET, C++ (Win32 Cryptography APIs, MFC), SQL Server*

## PERSONAL PROJECTS

### Spell Checking WinRT Component (For C#, VB)

<https://social.technet.microsoft.com/wiki/contents/articles/17558.spell-checking-winrt-component-c-vb-html5javascript.aspx>

### Vocabmeter - Universal Windows Platform Store App

<https://www.microsoft.com/en-us/p/vocabmeter/gwzdnrcrdnj3v>

### Vocabmeter - Android App

[https://play.google.com/store/apps/details?id=the3screator.vocabmeter\\_1](https://play.google.com/store/apps/details?id=the3screator.vocabmeter_1)

### Memory Match Maker - Android App

[https://play.google.com/store/apps/details?id=com.u3screator.memory\\_match\\_maker](https://play.google.com/store/apps/details?id=com.u3screator.memory_match_maker)