

# SOLIDWORKS

## CUSTOMIZATION

*Job*  
Referrals



CADVertex

## Online Training

- Basic to Advanced
- Flexible Timing
- VB + OOPS

Call: 9890611694

Visit:

[www.CADVertex.com](http://www.CADVertex.com)

**10**  
Projects

Download this PDF  
9 pages



### CADVertex Solutions

A-16 . Whispering Wind . Pashan-Baner Link Road . Pashan . Pune . 411021  
www.CADVertex.com [info@cadvertex.com](mailto:info@cadvertex.com) Phone :+91 9890611694

---

## SolidWorks Customization

Language: VB.NET or CSharp

---

### Training Structure

**Module 1:** VB.Net or CSharp In-depth

**Module 2:** Solidworks Files and UI Automation

**Module 3:** Drawing Automation, Part Automation, Assembly Automation

**Fees** Check website: <https://www.cadvertex.com/training.htm>

**Phone** +91 9890611694

**eMail:** [info@CADVertex.com](mailto:info@CADVertex.com)

### Features:

- ✓ Personal coaching - no recorded videos.
- ✓ Flexible timings.
- ✓ Weekday batches.
- ✓ Weekend batches.
- ✓ CSharp or VB.Net programming - indepth training included.
- ✓ Unlimited support after training - at no extra cost!
- ✓ 10 industry projects – as listed on next page.
- ✓ Resume Preparation.
- ✓ Interview Preparation.
- ✓ Job referrals.

## Training Highlights



Online Training



Flexible Timings



Trainer: 25 yrs Exp.



Duration: 6 Wks



1 Hour Daily



Basic to Advanced



10 Industry Projs



Certificate



Support after Training



CuttingEdge Tech

## List of Projects

1. Geometric Calculator
2. Batch Processor
3. Paper Estimation
4. Create 3 Standard Dwg Views
5. Modify Dimensions in Bulk
6. Automatic Title Block Update
7. Estimate Cutting Cost
8. Estimate Machining Cost
9. Parametric Parts
10. Product Configurator

## **Module 1: VB.Net or CSharp In-depth**

### **1. Installing Visual Studio**

- Installing an older version.
- Setting the default language.
- Setting the environment and preferences.
- Customizing the layout.
- Solution Explorer, output and error windows.

### **2. Console applications and introduction to programming**

- Selecting a project template.
- Setting up user interaction and collecting inputs.
- Calculations and output display.
- Using the .Net Math library functions.
- Various files and their meaning in the project structure.
- Separating source code from the executable.

### **3. Creating a Windows Forms Application**

- Setting dialog box properties.
- Toolbox and the Properties window.
- Adding controls: Button, TextBox, Label, Checkbox, RadioButton.
- Adding images to PictureBox and other controls.
- Aligning text and images on controls.
- Composite controls: ListBox and ComboBox.
- Adjusting various properties for each type of control.
- Variable types - Double, Integer, String and Boolean.
- Acquiring user input from various controls into variables.

### **4. File Open dialog and File Save dialogs**

- Creating basic, compound and composite file filters.
- Dialog properties and startup paths.
- Reading single and multiple files from a file dialog.
- Opening various type of files using a file dialog.

### **5. Folder Selection Dialog**

- Getting files from folder.
- Filtering file types in a folder dialog.
- IO.Directory functions.
- Anchoring controls to the Form.

## 6. Message Boxes

- Configuring single line and multiline messages.
- Button and icon selection.
- Using If-Then-Else statements.
- Checking message box responses.

## 7. Arrays

- Filling arrays and reading array elements.
- Filling ListBoxes with array elements.
- For Loop, ForEach and While loop.

## 8. Functions and Subroutines

- Arguments in functions.
- Return types in functions.
- ByRef or out arguments.
- Function overloading.

## Module 2 : SolidWorks Files and UI Automation

### 09. Getting Started

- ❖ Connect to SolidWorks
- ❖ Start and Stop SolidWorks
- ❖ Traversing the SolidWorks object model
- ❖ SolidWorks document constants
- ❖ Determine active document type

### 10. SolidWorks Documents:

- ❖ Create new SolidWorks files
- ❖ Open, Close, Save and SaveAs SolidWorks files
- ❖ Export SolidWorks documents to other formats
- ❖ Activate files in a session

### 11. File Handling

- ❖ Windows standard file Open/Save dialogs to select SolidWorks files.
- ❖ Setting SolidWorks file filters and validations
- ❖ Single and multiple file selection
- ❖ Invoke SolidWorks's standard file Open and Save dialogs.

### 12. Batch Processing

- ❖ [Industry Project](#) - Create a Batch Processor for Handling SolidWorks Documents
- ❖ Use the Windows 'Browse for Folder' dialog, gather all files of a specified type into a .Net collection, selectively remove unwanted files from the list.
- ❖ Export the batch of documents to formats like DWG, STP, etc.

### 13. Excel Automation and Solidworks Integration

- ❖ Integrating Solidworks API with Excel.
- ❖ Invoking Excel and Connecting to Excel.
- ❖ Creating new workbook.
- ❖ Connecting to existing worksheets.
- ❖ Accessing range and cells.
- ❖ Writing and reading values from cells.
- ❖ Formulas and results.
- ❖ Excel Macro recording and integration.
- ❖ Formatting cells - font and layout.
- ❖ Reading Excel data into Solidworks.
- ❖ Writing out Solidworks data to Excel.
  
- ❖ **Project** - Writing Solidworks Information to Excel.
- ❖ **Project** - Reading from Excel into Solidworks.

## Module 3 : Drawing, Part and Assembly Automation

### 14. Managing Sheets In Drawings

- ❖ Creating drawing sheets
- ❖ Accessing, counting sheets and extracting sheet info
- ❖ Switching between sheets
- ❖ Deleting sheets
- ❖ Exporting sheets to DXF, etc.
- ❖ **Industry Project** - Estimating Paper Requirement for Printing Drawings

### 15. Drawing Views

- ❖ Create drawing views
- ❖ **Industry Project** - Creating Standard Views of a Model in SolidWorks

### 16. Dimensions in Drawings

- ❖ Learn to handle Dimensions In SolidWorks Drawings
- ❖ Traversing dimensions and checking dimension types
- ❖ Getting and setting properties of dimension like prefix and suffix
- ❖ **Industry Project** - Modifying Dimensions in Bulk

### 17. Handling Text In Drawings

- ❖ Access text objects in a drawing document
- ❖ **Industry Project** - Automatic Title Block Updater Program

### 18. 2D Objects in Drawings

- ❖ Selection manager in SolidWorks
- ❖ **Industry Project** - Estimate Cutting Cost of a Milling Profile

## 19. Part Features

- ❖ Traversing the features of a SolidWorks model
- ❖ Determine type of features like hole, extrusions, draft, fillet, etc.
- ❖ Feature sub-type like various hole types
- ❖ [Industry Project](#) - Estimate Machining Cost for a Plate with Various Holes

## 20. Parametric Parts

- ❖ Create and control parametric part in SolidWorks
- ❖ Part parameters , model rebuilding and refitting
- ❖ [Industry Project](#) - Update the features of a Parametric Shaft with Keyway.

## 21. Advanced Part Features

- ❖ Creating variations of a part by manipulating features
- ❖ [Industry Project](#) - Build a Part Configurator from Scratch

## 22. SolidWorks Document Properties

- ❖ Read and write standard file properties
- ❖ Create, read and write custom properties

## 23. SolidWorks Assemblies

- ❖ Traverse through all components of a SolidWorks assembly
- ❖ [Industry Project](#) - Cost Estimation for Spray Painting

## 24. Product Configurator

- ❖ [Industry Project](#) - Create a SolidWorks Product Configurator
- ❖ Automatically generate custom assemblies
- ❖ Create and set up a parts library
- ❖ Build a UI to choose parts from the library
- ❖ Traverse through a SolidWorks product document and build the product configuration as specified by the user

## Other eBooks and Training Programs from CADVertex:

- ❖ CATIA Automation: VB.Net or CSharp or Python
- ❖ SolidWorks Automation: VB.Net or CSharp or Python
- ❖ Solid Edge Automation: VB.Net or CSharp or Python
- ❖ Inventor Automation: VB.Net or CSharp or Python
  
- ❖ NX Open: with Win Forms
- ❖ NX Open: with Block UI Styler
- ❖ Knowledge Fusion Programming
- ❖ uFunc Programming
  
- ❖ cMayoCAD: Learn to build a new CAD program from scratch using a Geometric Modeling Kernel and CSharp
  
- ❖ [Revit Automation using CSharp.Net](#)
- ❖ [Tekla Automation using CSharp.Net](#)
  
- ❖ CATIA Automation with Python + Machine Learning
- ❖ Solid Edge Automation with Python + Machine Learning
- ❖ SolidWorks Automation with Python + Machine Learning
- ❖ Inventor Automation with Python + Machine Learning

---

### **CADVertex Software**

A-16 . Whispering Wind . Pashan-Baner Link Road  
Pashan . Pune . 411021

[www.CADVertex.com](http://www.CADVertex.com)  
[info@cadvertex.com](mailto:info@cadvertex.com) Phone :+91 9890611694

---



Join  
CADVertex

[CAD-BIM Automation Group](#)  
**WhatsApp**



Join  
CADVertex

[CAD-BIM Automation Group](#)  
**Telegram**



Follow

[CADVertex on LinkedIn](#)



Follow

[CADVertex on Facebook](#)



Follow

[CADVertex on Instagram](#)

**Phone & Chat**

**+ 91 9890611694**

**eMail**

[info@CADVertex.com](mailto:info@CADVertex.com)

**Website**

[www.CADVertex.com](http://www.CADVertex.com)