

Namespace Sensing4USensor

Classes

[Sensing4UApp](#)

Main application form for the Sensing4U Sensor Management System. Allows users to load, view, filter, and save sensor datasets.

Class Sensing4UApp

Namespace: [Sensing4USensor](#)

Assembly: Sensing4USensor.dll

Main application form for the Sensing4U Sensor Management System. Allows users to load, view, filter, and save sensor datasets.

```
public class Sensing4UApp : Form, IDropTarget, ISynchronizeInvoke, IWin32Window,
    IBindableComponent, IComponent, IDisposable, IContainerControl
```

Inheritance

[object](#) ← [MarshalByRefObject](#) ← [Component](#) ← [Control](#) ← [ScrollableControl](#) ← [ContainerControl](#) ← [Form](#) ← Sensing4UApp

Implements

[IDropTarget](#), [ISynchronizeInvoke](#), [IWin32Window](#), [IBindableComponent](#), [IComponent](#), [IDisposable](#), [IContainerControl](#)

Inherited Members

[Form.SetVisibleCore\(bool\)](#), [Form.OnFormCornerPreferenceChanged\(EventArgs\)](#), [Form.OnFormBorderColorChanged\(EventArgs\)](#), [Form.OnFormCaptionBackColorChanged\(EventArgs\)](#), [Form.OnFormCaptionTextColorChanged\(EventArgs\)](#), [Form.Activate\(\)](#), [Form.ActivateMdiChild\(Form\)](#), [Form.AddOwnedForm\(Form\)](#), [Form.AdjustFormScrollbars\(bool\)](#), [Form.Close\(\)](#), [Form.CreateAccessibilityInstance\(\)](#), [Form.CreateControlsInstance\(\)](#), [Form.CreateHandle\(\)](#), [Form.DefWndProc\(ref Message\)](#), [Form.ProcessMnemonic\(char\)](#), [Form.CenterToParent\(\)](#), [Form.CenterToScreen\(\)](#), [Form.LayoutMdi\(MdiLayout\)](#), [Form.OnActivated\(EventArgs\)](#), [Form.OnBackgroundImageChanged\(EventArgs\)](#), [Form.OnBackgroundImageLayoutChanged\(EventArgs\)](#), [Form.OnClosing\(CancelEventArgs\)](#), [Form.OnClosed\(EventArgs\)](#), [Form.OnFormClosing\(FormClosingEventArgs\)](#), [Form.OnFormClosed\(FormClosedEventArgs\)](#), [Form.OnCreateControl\(\)](#), [Form.OnDeactivate\(EventArgs\)](#), [Form.OnEnabledChanged\(EventArgs\)](#), [Form.OnEnter\(EventArgs\)](#), [Form.OnFontChanged\(EventArgs\)](#), [Form.OnGotFocus\(EventArgs\)](#), [Form.OnHandleCreated\(EventArgs\)](#), [Form.OnHandleDestroyed\(EventArgs\)](#), [Form.OnHelpButtonClicked\(CancelEventArgs\)](#), [Form.OnLayout\(LayoutEventArgs\)](#), [Form.OnLoad\(EventArgs\)](#), [Form.OnMaximizedBoundsChanged\(EventArgs\)](#), [Form.OnMaximumSizeChanged\(EventArgs\)](#), [Form.OnMinimumSizeChanged\(EventArgs\)](#), [Form.OnInputLanguageChanged\(InputLanguageChangedEventArgs\)](#), [Form.OnInputLanguageChanging\(InputLanguageChangingEventArgs\)](#),

[Form.OnVisibleChanged\(EventArgs\)](#), [Form.OnMdiChildActivate\(EventArgs\)](#),
[Form.OnMenuStart\(EventArgs\)](#), [Form.OnMenuComplete\(EventArgs\)](#),
[Form.OnPaint\(PaintEventArgs\)](#), [Form.OnResize\(EventArgs\)](#),
[Form.OnDpiChanged\(DpiChangedEventArgs\)](#), [Form.OnGetDpiScaledSize\(int, int, ref Size\)](#),
[Form.OnRightToLeftLayoutChanged\(EventArgs\)](#), [Form.OnShown\(EventArgs\)](#),
[Form.OnTextChanged\(EventArgs\)](#), [Form.ProcessCmdKey\(ref Message, Keys\)](#),
[Form.ProcessDialogKey\(Keys\)](#), [Form.ProcessDialogChar\(char\)](#),
[Form.ProcessKeyPreview\(ref Message\)](#), [Form.ProcessTabKey\(bool\)](#),
[Form.RemoveOwnedForm\(Form\)](#), [Form.Select\(bool, bool\)](#),
[Form.ScaleMinMaxSize\(float, float, bool\)](#),
[Form.GetScaledBounds\(Rectangle, SizeF, BoundsSpecified\)](#),
[Form.ScaleControl\(SizeF, BoundsSpecified\)](#), [Form.SetBoundsCore\(int, int, int, int, BoundsSpecified\)](#),
[Form.SetClientSizeCore\(int, int\)](#), [Form.SetDesktopBounds\(int, int, int, int\)](#),
[Form.SetDesktopLocation\(int, int\)](#), [Form.Show\(IWin32Window\)](#),
[Form.ShowAsync\(IWin32Window\)](#), [Form.ShowDialog\(\)](#), [Form.ShowDialog\(IWin32Window\)](#),
[Form.ShowDialogAsync\(\)](#), [Form.ShowDialogAsync\(IWin32Window\)](#), [Form.ToString\(\)](#),
[Form.UpdateDefaultButton\(\)](#), [Form.OnResizeBegin\(EventArgs\)](#), [Form.OnResizeEnd\(EventArgs\)](#),
[Form.OnStyleChanged\(EventArgs\)](#), [Form.ValidateChildren\(\)](#),
[Form.ValidateChildren\(ValidationConstraints\)](#), [Form.WndProc\(ref Message\)](#), [Form.AcceptButton](#),
[Form.ActiveForm](#), [Form.ActiveMdiChild](#), [Form.AllowTransparency](#), [Form.AutoScroll](#),
[Form.AutoSize](#), [Form.AutoSizeMode](#), [Form.AutoValidate](#), [Form.BackColor](#),
[Form.FormBorderStyle](#), [Form.CancelButton](#), [Form.ClientSize](#), [Form.ControlBox](#),
[Form.CreateParams](#), [Form.DefaultImeMode](#), [Form.DefaultSize](#), [Form.DesktopBounds](#),
[Form.DesktopLocation](#), [Form.DialogResult](#), [Form.HelpButton](#), [Form.Icon](#), [Form.IsMdiChild](#),
[Form.IsMdiContainer](#), [Form.IsRestrictedWindow](#), [Form.KeyPreview](#), [Form.Location](#),
[Form.MaximizedBounds](#), [Form.MaximumSize](#), [Form.MainMenuStrip](#), [Form.MinimumSize](#),
[Form.MaximizeBox](#), [Form.MdiChildren](#), [Form.MdiChildrenMinimizedAnchorBottom](#),
[Form.MdiParent](#), [Form.MinimizeBox](#), [Form.Modal](#), [Form.Opacity](#), [Form.OwnedForms](#),
[Form.Owner](#), [Form.RestoreBounds](#), [Form.RightToLeftLayout](#), [Form.ShowInTaskbar](#),
[Form.ShowIcon](#), [Form.ShowWithoutActivation](#), [Form.Size](#), [Form.SizeGripStyle](#),
[Form.StartPosition](#), [Form.Text](#), [Form.TopLevel](#), [Form.TopMost](#), [Form.TransparencyKey](#),
[Form.FormBorderStyleColor](#), [Form.FormBorderStyleColorChanged](#), [Form.FormCaptionBackColor](#),
[Form.FormCaptionTextColor](#), [Form.WindowState](#), [Form.AutoSizeChanged](#),
[Form.AutoValidateChanged](#), [Form.HelpButtonClicked](#), [Form.MaximizedBoundsChanged](#),
[Form.MaximumSizeChanged](#), [Form.MinimumSizeChanged](#), [Form.Activated](#), [Form.Deactivate](#),
[Form.FormClosing](#), [Form.FormBorderStyleColorChanged](#), [Form.FormCaptionBackColorChanged](#),
[Form.FormCaptionTextColorChanged](#), [Form.FormCornerPreferenceChanged](#), [Form.FormClosed](#),
[Form.Load](#), [Form.MdiChildActivate](#), [Form.MenuComplete](#), [Form.MenuStart](#),
[Form.InputLanguageChanged](#), [Form.InputLanguageChanging](#), [Form.RightToLeftLayoutChanged](#),
[Form.Shown](#), [Form.DpiChanged](#), [Form.ResizeBegin](#), [Form.ResizeEnd](#),

[ContainerControl.OnAutoValidateChanged\(EventArgs\)](#), [ContainerControl.OnMove\(EventArgs\)](#), [ContainerControl.OnParentChanged\(EventArgs\)](#), [ContainerControl.PerformAutoScale\(\)](#), [ContainerControl.RescaleConstantsForDpi\(int, int\)](#), [ContainerControl.Validate\(\)](#), [ContainerControl.Validate\(bool\)](#), [ContainerControl.AutoScaleDimensions](#), [ContainerControl.AutoScaleFactor](#), [ContainerControl.AutoScaleMode](#), [ContainerControl.BindingContext](#), [ContainerControl.CanEnableIme](#), [ContainerControl.ActiveControl](#), [ContainerControl.CurrentAutoScaleDimensions](#), [ContainerControl.ParentForm](#), [ScrollableControl.ScrollStateAutoScrolling](#), [ScrollableControl.ScrollStateHScrollVisible](#), [ScrollableControl.ScrollStateVScrollVisible](#), [ScrollableControl.ScrollStateUserHasScrolled](#), [ScrollableControl.ScrollStateFullDrag](#), [ScrollableControl.GetScrollState\(int\)](#), [ScrollableControl.OnMouseWheel\(MouseEventArgs\)](#), [ScrollableControl.OnRightToLeftChanged\(EventArgs\)](#), [ScrollableControl.OnPaintBackground\(PaintEventArgs\)](#), [ScrollableControl.OnPaddingChanged\(EventArgs\)](#), [ScrollableControl.SetDisplayRectLocation\(int, int\)](#), [ScrollableControl.ScrollControlIntoView\(Control\)](#), [ScrollableControl.ScrollToControl\(Control\)](#), [ScrollableControl.OnScroll\(ScrollEventArgs\)](#), [ScrollableControl.SetAutoScrollMargin\(int, int\)](#), [ScrollableControl.SetScrollState\(int, bool\)](#), [ScrollableControl.AutoScrollMargin](#), [ScrollableControl.AutoScrollPosition](#), [ScrollableControl.AutoScrollMinSize](#), [ScrollableControl.DisplayRectangle](#), [ScrollableControl.HScroll](#), [ScrollableControl.HorizontalScroll](#), [ScrollableControl.VScroll](#), [ScrollableControl.VerticalScroll](#), [ScrollableControl.Scroll](#), [Control.GetAccessibilityObjectById\(int\)](#), [Control.SetAutoSizeMode\(AutoSizeMode\)](#), [Control.GetAutoSizeMode\(\)](#), [Control.GetPreferredSize\(Size\)](#), [Control.AccessibilityNotifyClients\(AccessibleEvents, int\)](#), [Control.AccessibilityNotifyClients\(AccessibleEvents, int, int\)](#), [Control.BeginInvoke\(Delegate\)](#), [Control.BeginInvoke\(Action\)](#), [Control.BeginInvoke\(Delegate, params object\[\]\)](#), [Control.BringToFront\(\)](#), [Control.Contains\(Control\)](#), [Control.CreateGraphics\(\)](#), [Control.CreateControl\(\)](#), [Control.DestroyHandle\(\)](#), [Control.DoDragDrop\(object, DragDropEffects\)](#), [Control.DoDragDrop\(object, DragDropEffects, Bitmap, Point, bool\)](#), [Control.DrawToBitmap\(Bitmap, Rectangle\)](#), [Control.EndInvoke\(IAsyncResult\)](#), [Control.FindForm\(\)](#), [Control.GetTopLevel\(\)](#), [Control.RaiseKeyEvent\(object, KeyEventArgs\)](#), [Control.RaiseMouseEvent\(object, MouseEventArgs\)](#), [Control.Focus\(\)](#), [Control.FromChildHandle\(nint\)](#), [Control.FromHandle\(nint\)](#), [Control.GetChildAtPoint\(Point, GetChildAtPointSkip\)](#), [Control.GetChildAtPoint\(Point\)](#), [Control.GetContainerControl\(\)](#), [Control.GetNextControl\(Control, bool\)](#), [Control.GetStyle\(ControlStyles\)](#), [Control.Hide\(\)](#), [Control.InitLayout\(\)](#), [Control.Invalidate\(Region\)](#), [Control.Invalidate\(Region, bool\)](#), [Control.Invalidate\(\)](#), [Control.Invalidate\(bool\)](#), [Control.Invalidate\(Rectangle\)](#), [Control.Invalidate\(Rectangle, bool\)](#), [Control.Invoke\(Action\)](#), [Control.Invoke\(Delegate\)](#), [Control.Invoke\(Delegate, params object\[\]\)](#), [Control.Invoke<T>\(Func<T>\)](#), [Control.InvokePaint\(Control, PaintEventArgs\)](#), [Control.InvokePaintBackground\(Control, PaintEventArgs\)](#), [Control.IsKeyLocked\(Keys\)](#),

[Control.IsInputChar\(char\)](#), [Control.IsInputKey\(Keys\)](#), [Control.IsMnemonic\(char, string\)](#),
[Control.LogicalToDeviceUnits\(int\)](#), [Control.LogicalToDeviceUnits\(Size\)](#),
[Control.ScaleBitmapLogicalToDevice\(ref Bitmap\)](#), [Control.NotifyInvalidated\(Rectangle\)](#),
[Control.InvokeOnClick\(Control, EventArgs\)](#), [Control.OnAutoSizeChanged\(EventArgs\)](#),
[Control.OnBackColorChanged\(EventArgs\)](#), [Control.OnBindingContextChanged\(EventArgs\)](#),
[Control.OnCausesValidationChanged\(EventArgs\)](#), [Control.OnContextMenuStripChanged\(EventArgs\)](#),
[Control.OnCursorChanged\(EventArgs\)](#), [Control.OnDataContextChanged\(EventArgs\)](#),
[Control.OnDockChanged\(EventArgs\)](#), [Control.OnForeColorChanged\(EventArgs\)](#),
[Control.OnNotifyMessage\(Message\)](#), [Control.OnParentBackColorChanged\(EventArgs\)](#),
[Control.OnParentBackgroundImageChanged\(EventArgs\)](#),
[Control.OnParentBindingContextChanged\(EventArgs\)](#), [Control.OnParentCursorChanged\(EventArgs\)](#),
[Control.OnParentDataContextChanged\(EventArgs\)](#), [Control.OnParentEnabledChanged\(EventArgs\)](#),
[Control.OnParentFontChanged\(EventArgs\)](#), [Control.OnParentForeColorChanged\(EventArgs\)](#),
[Control.OnParentRightToLeftChanged\(EventArgs\)](#), [Control.OnParentVisibleChanged\(EventArgs\)](#),
[Control.OnPrint\(PaintEventArgs\)](#), [Control.OnTabIndexChanged\(EventArgs\)](#),
[Control.OnTabStopChanged\(EventArgs\)](#), [Control.OnClick\(EventArgs\)](#),
[Control.OnClientSizeChanged\(EventArgs\)](#), [Control.OnControlAdded\(ControlEventArgs\)](#),
[Control.OnControlRemoved\(ControlEventArgs\)](#), [Control.OnLocationChanged\(EventArgs\)](#),
[Control.OnDoubleClick\(EventArgs\)](#), [Control.OnDragEnter\(DragEventArgs\)](#),
[Control.OnDragOver\(DragEventArgs\)](#), [Control.OnDragLeave\(EventArgs\)](#),
[Control.OnDragDrop\(DragEventArgs\)](#), [Control.OnGiveFeedback\(GiveFeedbackEventArgs\)](#),
[Control.InvokeGotFocus\(Control, EventArgs\)](#), [Control.OnHelpRequested\(HelpEventArgs\)](#),
[Control.OnInvalidated\(InvalidateEventArgs\)](#), [Control.OnKeyDown\(KeyEventArgs\)](#),
[Control.OnKeyPress\(KeyPressEventArgs\)](#), [Control.OnKeyUp\(KeyEventArgs\)](#),
[Control.OnLeave\(EventArgs\)](#), [Control.InvokeLostFocus\(Control, EventArgs\)](#),
[Control.OnLostFocus\(EventArgs\)](#), [Control.OnMarginChanged\(EventArgs\)](#),
[Control.OnMouseDoubleClick\(MouseEventArgs\)](#), [Control.OnMouseClick\(MouseEventArgs\)](#),
[Control.OnMouseCaptureChanged\(EventArgs\)](#), [Control.OnMouseDown\(MouseEventArgs\)](#),
[Control.OnMouseEnter\(EventArgs\)](#), [Control.OnMouseLeave\(EventArgs\)](#),
[Control.OnDpiChangedBeforeParent\(EventArgs\)](#), [Control.OnDpiChangedAfterParent\(EventArgs\)](#),
[Control.OnMouseHover\(EventArgs\)](#), [Control.OnMouseMove\(MouseEventArgs\)](#),
[Control.OnMouseUp\(MouseEventArgs\)](#),
[Control.OnQueryContinueDrag\(QueryContinueDragEventArgs\)](#),
[Control.OnRegionChanged\(EventArgs\)](#), [Control.OnPreviewKeyDown\(PreviewKeyDownEventArgs\)](#),
[Control.OnSizeChanged\(EventArgs\)](#), [Control.OnChangeUICues\(UICuesEventArgs\)](#),
[Control.OnSystemColorsChanged\(EventArgs\)](#), [Control.OnValidating\(CancelEventArgs\)](#),
[Control.OnValidated\(EventArgs\)](#), [Control.PerformLayout\(\)](#), [Control.PerformLayout\(Control, string\)](#),
[Control.PointToClient\(Point\)](#), [Control.PointToScreen\(Point\)](#),
[Control.PreProcessMessage\(ref Message\)](#), [Control.PreProcessControlMessage\(ref Message\)](#),
[Control.ProcessKeyEventArgs\(ref Message\)](#), [Control.ProcessKeyMessage\(ref Message\)](#),

[Control.RaiseDragEvent\(object, DragEventArgs\)](#), [Control.RaisePaintEvent\(object, PaintEventArgs\)](#), [Control.RecreateHandle\(\)](#), [Control.RectangleToClient\(Rectangle\)](#), [Control.RectangleToScreen\(Rectangle\)](#), [Control.ReflectMessage\(nint, ref Message\)](#), [Control.Refresh\(\)](#), [Control.ResetMouseEventArgs\(\)](#), [Control.ResetText\(\)](#), [Control.ResumeLayout\(\)](#), [Control.ResumeLayout\(bool\)](#), [Control.Scale\(SizeF\)](#), [Control.Select\(\)](#), [Control.SelectNextControl\(Control, bool, bool, bool, bool\)](#), [Control.SendToBack\(\)](#), [Control.SetBounds\(int, int, int, int\)](#), [Control.SetBounds\(int, int, int, int, BoundsSpecified\)](#), [Control.SizeFromClientSize\(Size\)](#), [Control.SetStyle\(ControlStyles, bool\)](#), [Control.SetTopLevel\(bool\)](#), [Control.RtlTranslateAlignment\(HorizontalAlignment\)](#), [Control.RtlTranslateAlignment\(LeftRightAlignment\)](#), [Control.RtlTranslateAlignment\(ContentAlignment\)](#), [Control.RtlTranslateHorizontal\(HorizontalAlignment\)](#), [Control.RtlTranslateLeftRight\(LeftRightAlignment\)](#), [Control.RtlTranslateContent\(ContentAlignment\)](#), [Control.Show\(\)](#), [Control.SuspendLayout\(\)](#), [Control.Update\(\)](#), [Control.UpdateBounds\(\)](#), [Control.UpdateBounds\(int, int, int, int\)](#), [Control.UpdateBounds\(int, int, int, int, int, int\)](#), [Control.UpdateZOrder\(\)](#), [Control.UpdateStyles\(\)](#), [Control.OnImeModeChanged\(EventArgs\)](#), [Control.InvokeAsync\(Action, CancellationToken\)](#), [Control.InvokeAsync<T>\(Func<T>, CancellationToken\)](#), [Control.InvokeAsync\(Func<CancellationToken, ValueTask>, CancellationToken\)](#), [Control.InvokeAsync<T>\(Func<CancellationToken, ValueTask<T>>, CancellationToken\)](#), [Control.AccessibilityObject](#), [Control.AccessibleDefaultActionDescription](#), [Control.AccessibleDescription](#), [Control.AccessibleName](#), [Control.AccessibleRole](#), [Control.AllowDrop](#), [Control.Anchor](#), [Control.AutoScrollOffset](#), [Control.LayoutEngine](#), [Control.DataContext](#), [Control.BackgroundImage](#), [Control.BackgroundImageLayout](#), [Control.Bottom](#), [Control.Bounds](#), [Control.CanFocus](#), [Control.CanRaiseEvents](#), [Control.CanSelect](#), [Control.Capture](#), [Control.CausesValidation](#), [Control.CheckForIllegalCrossThreadCalls](#), [Control.ClientRectangle](#), [Control.CompanyName](#), [Control.ContainsFocus](#), [Control.ContextMenuStrip](#), [Control.Controls](#), [Control.Created](#), [Control.Cursor](#), [Control.DataBindings](#), [Control.DefaultBackColor](#), [Control.DefaultCursor](#), [Control.DefaultFont](#), [Control.DefaultForeColor](#), [Control.DefaultMargin](#), [Control.DefaultMaximumSize](#), [Control.DefaultMinimumSize](#), [Control.DefaultPadding](#), [Control.DeviceDpi](#), [Control.IsDisposed](#), [Control.Disposing](#), [Control.Dock](#), [Control.DoubleBuffered](#), [Control.Enabled](#), [Control.Focused](#), [Control.Font](#), [Control.FontHeight](#), [Control.ForeColor](#), [Control.Handle](#), [Control.HasChildren](#), [Control.Height](#), [Control.IsHandleCreated](#), [Control.InvokeRequired](#), [Control.IsAccessible](#), [Control.IsAncestorSiteInDesignMode](#), [Control.IsMirrored](#), [Control.Left](#), [Control.Margin](#), [Control.ModifierKeys](#), [Control.MouseButtons](#), [Control.MousePosition](#), [Control.Name](#), [Control.Parent](#), [Control.ProductName](#), [Control.ProductVersion](#), [Control.RecreatingHandle](#), [Control.Region](#), [Control.RenderRightToLeft](#), [Control.ResizeRedraw](#), [Control.Right](#), [Control.RightToLeft](#), [Control.ScaleChildren](#), [Control.Site](#), [Control.TabIndex](#), [Control.TabStop](#),

[Control.Tag](#), [Control.Top](#), [Control.TopLevelControl](#), [Control.ShowKeyboardCues](#), [Control.ShowFocusCues](#), [Control.UseWaitCursor](#), [Control.Visible](#), [Control.Width](#), [Control.PreferredSize](#), [Control.Padding](#), [Control.ImeMode](#), [Control.ImeModeBase](#), [Control.PropagatingImeMode](#), [Control.BackColorChanged](#), [Control.BackgroundImageChanged](#), [Control.BackgroundImageLayoutChanged](#), [Control.BindingContextChanged](#), [Control.CausesValidationChanged](#), [Control.ClientSizeChanged](#), [Control.ContextMenuStripChanged](#), [Control.CursorChanged](#), [Control.DockChanged](#), [Control.EnabledChanged](#), [Control.FontChanged](#), [Control.ForeColorChanged](#), [Control.LocationChanged](#), [Control.MarginChanged](#), [Control.RegionChanged](#), [Control.RightToLeftChanged](#), [Control.SizeChanged](#), [Control.TabIndexChanged](#), [Control.TabStopChanged](#), [Control.TextChanged](#), [Control.VisibleChanged](#), [Control.Click](#), [Control.ControlAdded](#), [Control.ControlRemoved](#), [Control.DataContextChanged](#), [Control.DragDrop](#), [Control.DragEnter](#), [Control.DragOver](#), [Control.DragLeave](#), [Control.GiveFeedback](#), [Control.HandleCreated](#), [Control.HandleDestroyed](#), [Control.HelpRequested](#), [Control.Invalidated](#), [Control.PaddingChanged](#), [Control.Paint](#), [Control.QueryContinueDrag](#), [Control.QueryAccessibilityHelp](#), [Control.DoubleClick](#), [Control.Enter](#), [Control.GotFocus](#), [Control.KeyDown](#), [Control.KeyPress](#), [Control.KeyUp](#), [Control.Layout](#), [Control.Leave](#), [Control.LostFocus](#), [Control.MouseClick](#), [Control.MouseDoubleClick](#), [Control.MouseCaptureChanged](#), [Control.MouseDown](#), [Control.MouseEnter](#), [Control.MouseLeave](#), [Control.DpiChangedBeforeParent](#), [Control.DpiChangedAfterParent](#), [Control.MouseHover](#), [Control.MouseMove](#), [Control.MouseUp](#), [Control.MouseWheel](#), [Control.Move](#), [Control.PreviewKeyDown](#), [Control.Resize](#), [Control.ChangeUICues](#), [Control.StyleChanged](#), [Control.SystemColorsChanged](#), [Control.Validating](#), [Control.Validated](#), [Control.ParentChanged](#), [Control.ImeModeChanged](#), [Component.Dispose\(\)](#), [Component.GetService\(Type\)](#), [Component.Container](#), [Component.DesignMode](#), [Component.Events](#), [Component.Disposed](#), [MarshalByRefObject.GetLifetimeService\(\)](#), [MarshalByRefObject.InitializeLifetimeService\(\)](#), [MarshalByRefObject.MemberwiseClone\(bool\)](#), [object.Equals\(object\)](#), [object.Equals\(object, object\)](#), [object.GetHashCode\(\)](#), [object.GetType\(\)](#), [object.MemberwiseClone\(\)](#), [object.ReferenceEquals\(object, object\)](#)

Constructors

Sensing4UApp()

Initializes the application and UI components.

```
public Sensing4UApp()
```


Methods

Dispose(bool)

Clean up any resources being used.

```
protected override void Dispose(bool disposing)
```

Parameters

disposing [bool](#)

true if managed resources should be disposed; otherwise, false.

Namespace Sensing4USensor.Models

Classes

[SensorData](#)

Represents a sensor reading including metadata like timestamp, value, and category.

Enums

[ColorCategory](#)

Represents the color category of a sensor reading, based on its value range.

Enum ColorCategory

Namespace: [Sensing4USensor.Models](#)

Assembly: Sensing4USensor.dll

Represents the color category of a sensor reading, based on its value range.

```
public enum ColorCategory
```

Fields

Acceptable = 1

Sensor value is within the acceptable range.

High = 2

Sensor value is above the acceptable upper bound.

Low = 0

Sensor value is below the acceptable lower bound.

Class SensorData

Namespace: [Sensing4USensor.Models](#)

Assembly: Sensing4USensor.dll







Represents a sensor reading including metadata like timestamp, value, and category.

```
public class SensorData
```

Inheritance

[object](#)  ← SensorData

Inherited Members

[object.Equals\(object\)](#) , [object.Equals\(object, object\)](#) , [object.GetHashCode\(\)](#) , [object.GetType\(\)](#) ,
[object.MemberwiseClone\(\)](#) , [object.ReferenceEquals\(object, object\)](#) 

Constructors

SensorData()

Default constructor for fallback or placeholder data.

```
public SensorData()
```

SensorData(int, string, DateTime, double)

Creates a SensorData object with full properties.

```
public SensorData(int id, string sensorType, DateTime timestamp, double value)
```

Parameters

id [int](#) 

Sensor ID.

sensorType [string](#) 

Sensor label or type.

timestamp [DateTime](#)

Timestamp of the reading.

value [double](#)

Measured value.

SensorData(string, DateTime, double)

Overload constructor with default ID.

```
public SensorData(string sensorType, DateTime timestamp, double value)
```

Parameters

sensorType [string](#)

Sensor label or type.

timestamp [DateTime](#)

Timestamp of the reading.

value [double](#)

Measured value.

Properties

ColorCategory

Color category assigned based on the value range.

```
public ColorCategory ColorCategory { get; set; }
```

Property Value

[ColorCategory](#)

Date

Extracts the date portion of the timestamp (ignores time).

```
public DateTime Date { get; }
```

Property Value

[DateTime](#)[↗]

Hour

Extracts the hour portion of the timestamp.

```
public int Hour { get; }
```

Property Value

[int](#)[↗]

Id

Unique identifier for the sensor reading.

```
public int Id { get; set; }
```

Property Value

[int](#)[↗]

SensorType

Type or label of the sensor that generated the reading.

```
public string SensorType { get; set; }
```

Property Value

[string](#)

Timestamp

Date and time of the sensor reading.

```
public DateTime Timestamp { get; set; }
```

Property Value

[DateTime](#)

Value

Measured value from the sensor.

```
public double Value { get; set; }
```

Property Value

[double](#)

Methods

ToString()

Converts the SensorData instance into a formatted string.

```
public override string ToString()
```

Returns

[string](#) 

Formatted sensor reading with category and timestamp.

Namespace Sensing4USensor.Utils

Classes

[SensorColorClassifier](#)

Utility class for sensor color classification.

[SensorFileManager](#)

Provides methods to read and write sensor data from binary and CSV files. Implements the Singleton pattern for consistent file management.

Class SensorColorClassifier

Namespace: [Sensing4USensor.Utils](#)

Assembly: Sensing4USensor.dll








Utility class for sensor color classification.

```
public static class SensorColorClassifier
```

Inheritance

[object](#)  ← SensorColorClassifier

Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  ,
[object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

Methods

GetColor(double, double, double)

Returns a color category based on the value and given thresholds.

```
public static ColorCategory GetColor(double value, double lower, double upper)
```

Parameters

value [double](#) 

The sensor value.

lower [double](#) 

Lower acceptable threshold.

upper [double](#) 

Upper acceptable threshold.

Returns

[ColorCategory.](#)

Low, Acceptable, or High category.

Class SensorFileManager

Namespace: [Sensing4USensor.Utils](#)

Assembly: Sensing4USensor.dll








Provides methods to read and write sensor data from binary and CSV files. Implements the Singleton pattern for consistent file management.

```
public class SensorFileManager
```

Inheritance

[object](#)  ← SensorFileManager

Inherited Members

[object.Equals\(object\)](#)  , [object.Equals\(object, object\)](#)  , [object.GetHashCode\(\)](#)  , [object.GetType\(\)](#)  , [object.MemberwiseClone\(\)](#)  , [object.ReferenceEquals\(object, object\)](#)  , [object.ToString\(\)](#) 

Properties

Instance

Singleton instance of the SensorFileManager.

```
public static SensorFileManager Instance { get; }
```

Property Value

[SensorFileManager](#)

Methods

ReadGridCsv(string)

Reads sensor data from a CSV file with the format: Date, hour 0,..., hour 23.

```
public List<SensorData>? ReadGridCsv(string path)
```

Parameters

path [string](#)

Path to the CSV file.

Returns

[List](#) <[SensorData](#)>

List of SensorData or null if reading fails.

ReadPythonDetailedBinary(string)

Reads sensor data from a binary file created using Python-compatible format.

```
public List<SensorData>? ReadPythonDetailedBinary(string path)
```

Parameters

path [string](#)

Path of the binary file.

Returns

[List](#) <[SensorData](#)>

List of SensorData objects or null if an error occurs.

To2DArray(List<SensorData>)

Converts a flat list of SensorData into a 2D array with one column.

```
public SensorData[,] To2DArray(List<SensorData> list)
```

Parameters

list [List](#) <[SensorData](#)>

The list to convert.

Returns

[SensorData\[,\]](#)

A 2D array of SensorData [n,1].

ToDailyHourlyArray(List<SensorData>)

Converts a list of SensorData into a 2D array organized by [day, hour].

```
public SensorData[,] ToDailyHourlyArray(List<SensorData> data)
```

Parameters

data [List](#) [<SensorData>](#)

Flat list of sensor data records.

Returns

[SensorData\[,\]](#)

2D array of SensorData grouped by day and hour.

WriteBinary(string, SensorData[,])

Saves a 2D array of sensor data to a binary file.

```
public void WriteBinary(string path, SensorData[,] data)
```

Parameters

path [string](#)

Path where the file will be saved.

data [SensorData\[,\]](#)

The 2D array of SensorData to write.