

# IDataView preview

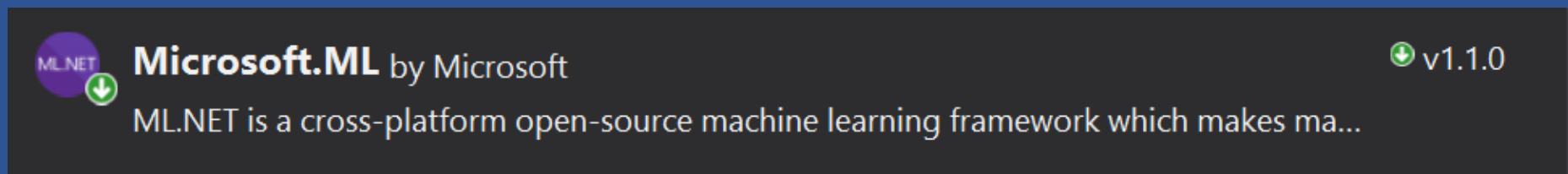
# What's in this session?

- Create data model via Classes
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- Accessing specific indices with IEnumerable
- Inspect values in a single column
- Write a method to Preview IDataView

# Create New Project

Create new .NET CORE console app project name = "Preview"

Add NuGet Packages



# Create data model via Classes

```
public partial class Adult
{
    [LoadColumn(0)]
    public short Id { get; set; }

    [LoadColumn(1)]
    public byte Age { get; set; }

    [LoadColumn(2)]
    public string Workclass { get; set; }

    [LoadColumn(3)]
    public string Education { get; set; }
}
```

# Convert IDataView to IEnumerable

```
// Convert IDataView to IEnumerable
IEnumerable<Adult> myAdult = mlContext.Data.CreateEnumerable<Adult>(
    data,
    reuseRowObject: true); // reuseRow to optimize performance
```

1	39	Manager	Bachelors
2	50	Sales	Bachelors
7	49	Private	9th
8	52	Programmer	HS-grad
16	34	Private	7th-8th
17	25	Self-emp-not-inc	HS-grad
18	32	Teacheer	HS-grad
19	38	Private	11th
23	35	Student	9th
26	56	Local-gov	Bachelors
27	19	Private	HS-grad
31	23	Local-gov	Assoc-acdm
34	30	Federal-gov	Some-college
35	22	State-gov	Some-college

# Accessing specific indices with IEnumerable

```
// Convert IDataView to IEnumerable  
Adult[] myAdult = mlContext.Data.CreateEnumerable<Adult>(  
    data,  
    reuseRowObject: false)  
    .Take(max)  
    .ToArray();
```

Manager  
Sales  
Private

# Inspect values in a single column

```
// Inspect IDataView values one row at a time  
IEnumerable<byte> sizeColumn = data.GetColumn<byte>("Age").ToList();
```

## Result

39 , 50 , 49 , 52 , 34 , 25 , 32 , 38 , 35 , 56 , 19 , 23 , 30 , 22 ,

# Write a method to Preview IDataView

```
public static void Preview(IDataView data)
{
    var myPreview = data.Preview();

    Console.WriteLine("\n-----show original data----- ");

    // ----- show header
    for (int k = 0; k < myPreview.Schema.Count(); k++)
        Console.Write($"{myPreview.Schema[k]} | ");
    Console.WriteLine("\n----- ");

    // ----- show data rows
    for (int j = 0; j < myPreview.RowView.Count(); j++)
    {
        for (int i = 0; i < myPreview.ColumnView.Count(); i++)
        {
            var v = myPreview.ColumnView[i].Values.GetValue(j);
            Console.Write($"{v}\t|");
        }
        Console.WriteLine();
    }
}
```



# What's next?

