Swift Line Chart Sample Code

ddas.tech/swift-line-chart-sample-code/

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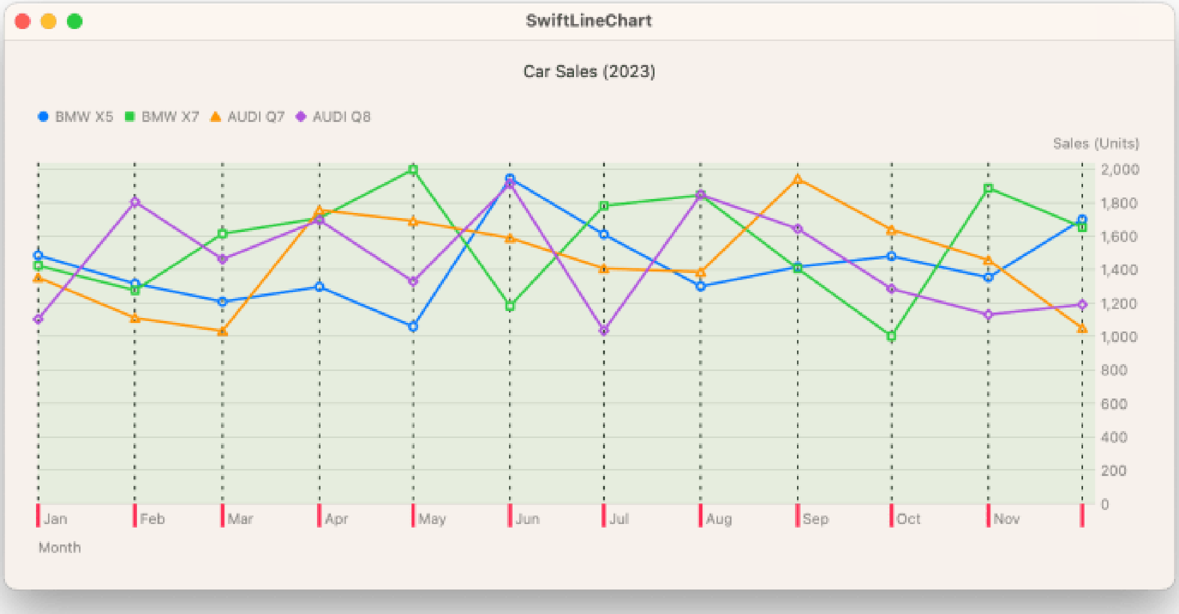

Swift Line Chart

In this post we will create a simple UI for Swift Line Chart – the view will contain 2 elements in a VStack (Element 1 – The header of the line chart and the 2nd element is the chart body itself)

The Swift Line Chart has the below customization

- Line Mark with custom line width
- Linear interpolation
- Custom color for chart background
- Custom padding for XScale and YScale.
- Custom X Axis Tick

```
//  ContentView.swift
//  SwiftLineChart
//  Created by Debasis Das on 7/12/23.

import SwiftUI
import Charts

struct ProductSalesRecord: Identifiable{
    var prodName: String
    var month: Int
    var date: Date
    var unitSales: Int
    var id: String {"\(prodName)-\(month)"}
    init(prodName: String, month: Int, unitSales: Int) {
        let calendar = Calendar.autoupdatingCurrent
        self.prodName = prodName
        self.month = month
        self.unitSales = unitSales
        self.date = calendar.date(from: DateComponents(year: 2023, month: month))!
    }
}

struct ContentView: View {
    var salesData: [ProductSalesRecord] = {
        var data:[ProductSalesRecord] = []
        //let prodNames = ["BMW X1","BMW X3","BMW X5","BMW X7","AUDI Q3","AUDI
Q5","AUDI Q7","AUDI Q8"]
        let prodNames = ["BMW X5","BMW X7","AUDI Q7","AUDI Q8"]
        let upperBound = 2000
        let lowerBound = 1000
        for prodName in prodNames {
            for month in 1...12{
                let rec = ProductSalesRecord(prodName: prodName, month: month,
unitSales: Int(arc4random_uniform(UInt32(upperBound - lowerBound))) + lowerBound)
                data.append(rec)
            }
        }
        return data
    }()
    var body: some View {
        VStack {
          Text("Car Sales (2023)")
            Chart(salesData) {
                LineMark(x: .value("Month", $0.date), y: .value("Sales Unit",
$0.unitSales))
                    .lineStyle(StrokeStyle(lineWidth: 2))
                    .interpolationMethod(.linear)
                    .foregroundStyle(by: .value("Product", $0.prodName))
                    .symbol(by: .value("Product", $0.prodName))
            }
            .chartPlotStyle { chartContent in
                        chartContent
```

```
                            .background(Color.green.opacity(0.1))
                    }
            .chartXAxis(.visible)
            .chartXAxis(content: {
                    AxisMarks(values: .stride(by: .month, count: 1)) {_ in
                        AxisGridLine(
                            centered: false,
                            stroke: StrokeStyle(
                                lineWidth: 1,
                                dash: [3, 5])).foregroundStyle(Color.black)
                        AxisTick(centered: true,
                             stroke: StrokeStyle(lineWidth:
3)).foregroundStyle(Color.pink)
                        AxisValueLabel()
                }
            })
            .chartXScale(range: .plotDimension(endPadding: 10))
            .chartYAxis{
                AxisMarks(values: .automatic(desiredCount: 10))
            }
            .chartLegend(position: .top, alignment: .leading)
            .chartYScale(range: .plotDimension(endPadding: 5))
            .chartYAxisLabel("Sales (Units)")
            .chartXAxisLabel("Month")
            .padding(10)
        }
        .padding()


    }
}

struct ContentView_Previews: PreviewProvider {
    static var previews: some View {
        ContentView()
    }
}
```

There are other interpolation methods available such as

- linear
- cardinal
- catmullRom
- monotone
- stepStart
- stepCenter
- stepEnd

Other Chart Types

Swift Bar Chart