Heyy !!

Flutter Developers Kenya 🇰🇪💙

I am,

- Gayathri Devi Srinivasan

- Actively contributing to many open source communities.
- Tech blogger, video creator and passionate
  tech speaker.
- Basically coming from a community driven
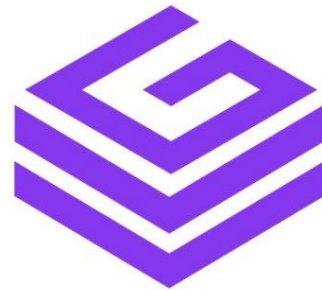   company
- Software Engineer @ GeekyAnts India,Bangalore

6+

Products

Let's unleash the power of custom paints in flutter for data visualization.

Significance of Data Visualizations

Your Choice ?
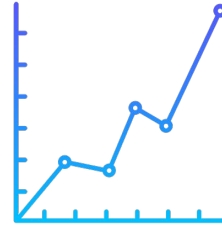
EVENTS ORGANIZED	
2023	Count
Meetups	12
Study Jams	10
Conferences	3
Twitter Space	15

@KenyaFlutterDev
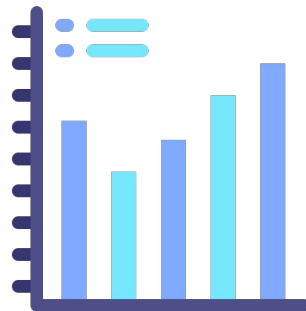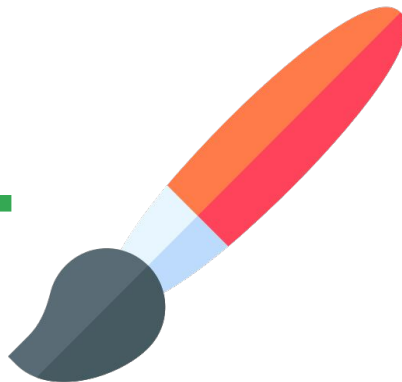
- **Improved User Experience.**

- **Data Driven Insights**

- **Enhanced Communication.**

- **Story Telling**

Custom Paints

In Flutter

Role of Custom Paints in Data Visualization

- **Versatility of Custom Paints**

- **Seamless Integrations**

- **Interactivity**

- **Performance**
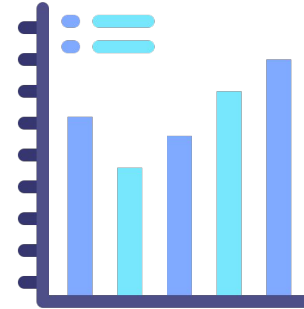
Approaches for Rendering Data with Custom Paints

- **Rendering Data Directly Using `Custompaint` Class.**

- **Rendering Data Indirectly using a Separate Layer and `CustomPaint` Class.**

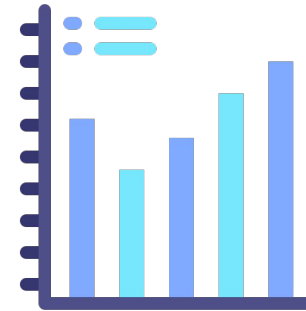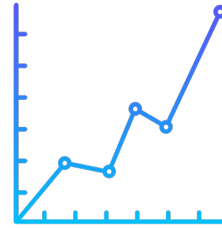Rendering Data Directly Using `Custompaint` Class.

- **Pros: Simplicity, Direct Control.**

- **Cons: Performance Impact**

Rendering Data Indirectly using a Separate Layer and `CustomPaint` Class.

- **Pros: Performance Optimization, Reduced Redrawing.**

- **Cons: Complexity, Limited dynamic**
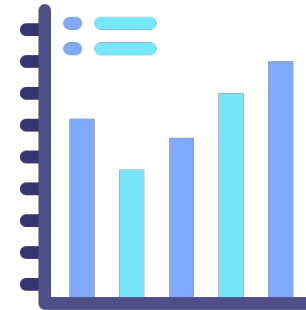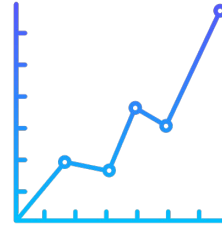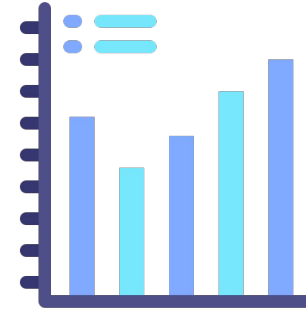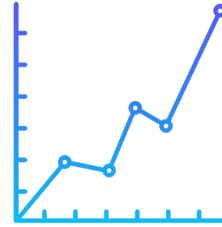
Performance Considerations

- Use the simplest possible approach.
- Avoid complex shapes or patterns.
- Utilize a separate layer for rendering data.
- Optimize the rendering code.
- Leverage hardware acceleration
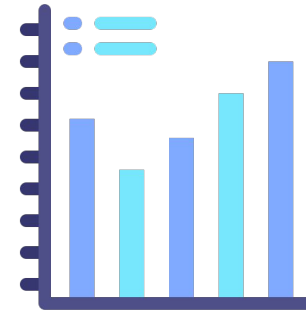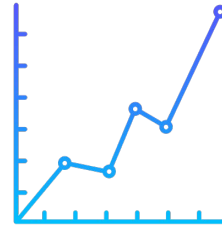
Challenges on Handling

Large Data Sets

- **Memory limitations**

- **Processing speed**

- **Display Limitations**

Handling this

Challenges

- **Use optimized data structures for fast access**
- **Implement caching mechanisms for frequently accessed data**
- **Apply lazy loading to load data only when needed**
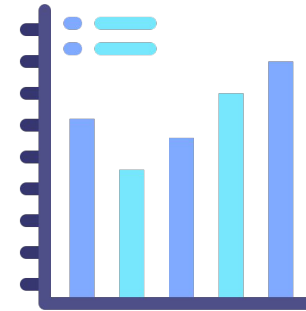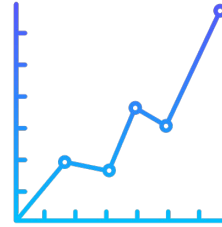- **Data Pagination**
- **Asynchronous Processing**
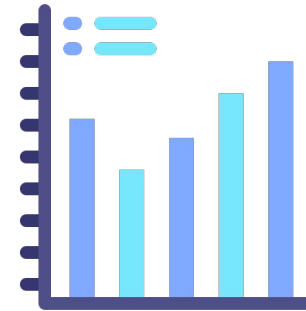
Data Visualization Techniques.

- **Choosing appropriate chart types.**

- **Scaling and normalization.**

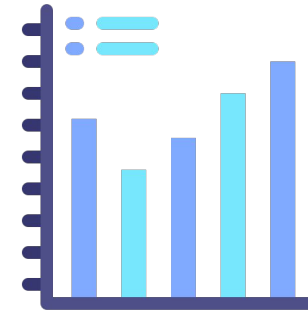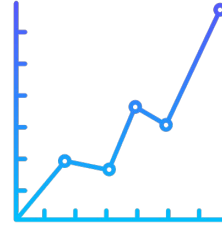- **Labels and legends.**

- **Animation and interactivity.**

Algorithms to learn for

better optimization

- **Depth First Search (DFS)**

- **Breadth First Search (BFS)**

- **Dijkstra's Algorithm**

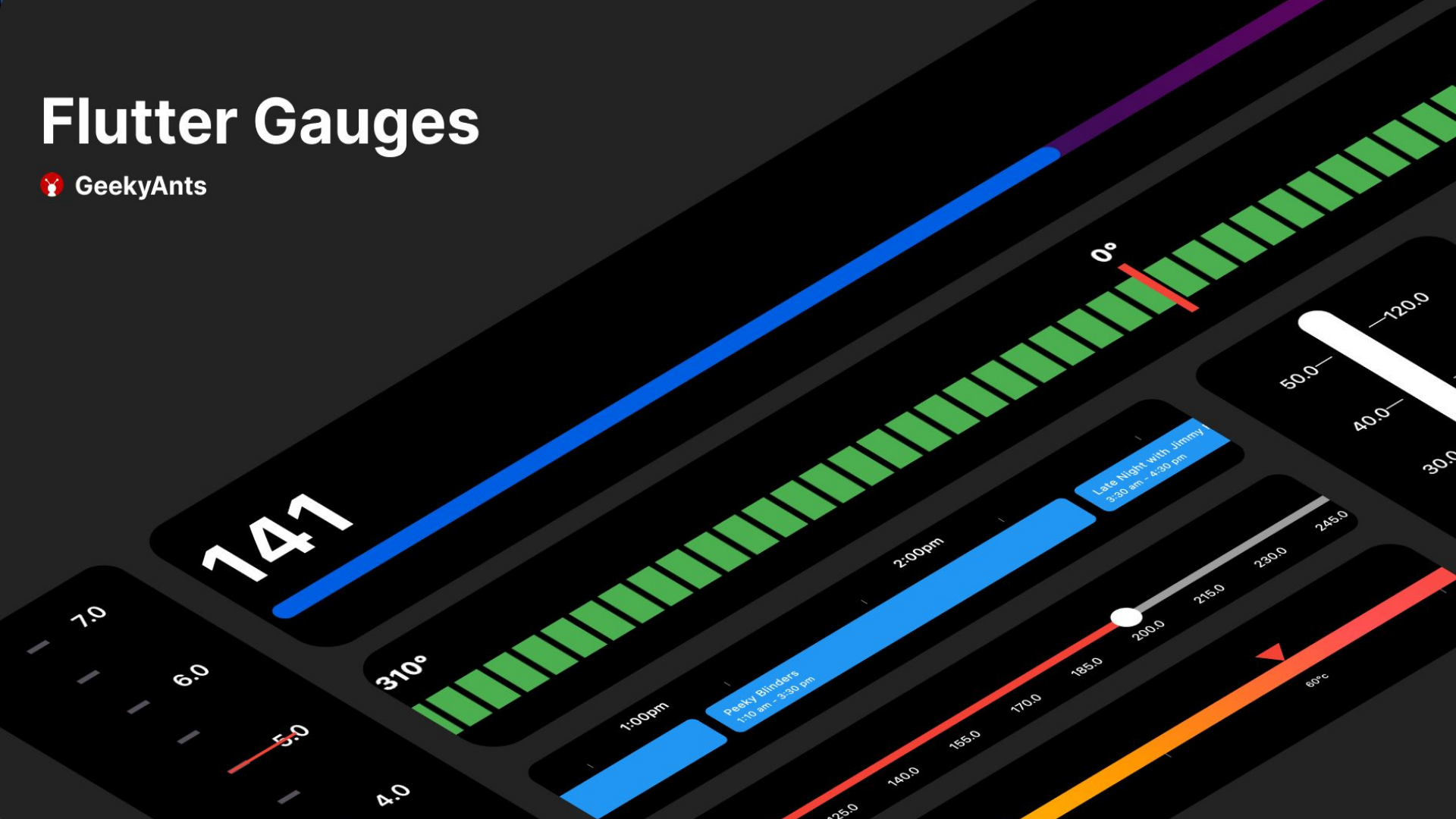- **Bellman-Ford Algorithm**

- **Floyd-Warshall Algorithm**

Demo

Flutter Gauges

GeekyAnts

141

310°

0°

7.0

6.0

5.0

4.0

1:00pm

2:00pm

Peeky Blinders
1:10 am - 3:30 pm

Late Night with Jimmy
3:30 am - 4:30 pm

120.0

50.0

40.0

30.0

245.0

230.0

215.0

200.0

185.0

170.0

155.0

140.0

125.0

60°c

geekyants_flutter_gauges: ^1.0.0+5

https://github.com/GayathrideviGA/FlutterKenya-Talk-2023

Thank you 💙

Connect with me on

🐦 @gayuga99

💼 Gayathri Devi
Srinivasan