

# Automatic Updation of Charts using RAG

You

June 16, 2024

## Abstract

Your abstract.

## 1 Introduction

### 1.1 Motivation

How automatic chart understanding helps?

what are the gaps?

are there research papers available for chart to JSON? Is there any advantage of converting to JSON in practical scenario?

does LLM improve quality of chart understanding or is it same as that in traditional methods.

Find out an application where automatic chart understanding has helped.

can we generate data analysis questions from a given chart (converted to JSON. doesjson helps in creating data analysis questions related to chart)?

### 1.2 Objectives

1. Conversion of charts to JSON. (Advantages ???)

Advantages of converting to JSON

- (a) JSON can represent complex nested structures and hierarchical data, which means that we can have a complex chart.  
**can we cite one example here of complex chart which has not been handled in any research work done till now.**
- (b) **from JSON, we can convert to other chart types ?? If yes, then it can be one of the advantage e.g a bar chart can be converted to line charts or so.**

### 1.3 Contribution

Provide a framework where any chart can be converted to its respective JSON which can be updated using a context given in pdf (or tex??). Finally the updated JSON can be converted to its respective chart or any other chart.

Can we add interpretation of updated chart in our work.

Using the JSON format, we can perform chart editing like changing the background or the colors etc.

The python code for that chart can be generated

Change the type of chart

Convert the chart to text. JSON can be converted to text

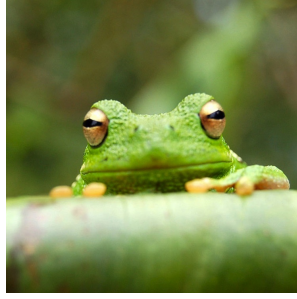


Figure 1: This frog was uploaded via the file-tree menu.

## **2 Related Work**

muskan, jatin, ajmera and kartik - pls fill the below parts for your papers. also make a summary para of your paper.

### **2.1 Types of Charts Handled**

### **2.2 Chart Datasets Used**

### **2.3 LLM Models Used**

### **2.4 Evaluation Metrics**

## **3 Methodology**

### **3.1 Chart to JSON Conversion**

explain different prompts used to create json. Mention the evaluation metrics

### **3.2 Updation of JSON using the latest Context (pdfs)**

### **3.3 Plotting of JSON to respective charts**

can we make different kinds of charts from a given json

## **4 Experiments**

### **4.1 Comparison of performance of different prompts**

mention the evaluation metrics used

### **4.2 How to include Figures**

### **4.3 How to add Tables**

## **References**