

# VAST Challenge 2023 - MC1

Charitha Vadamala

**4. Reflection: What was the most difficult aspect of working with this knowledge graph? Did you have the tools and resources you needed to complete the challenge? What additional resources would have helped you? Limit your response to 300 words**

Embarking on the task of working with a knowledge graph, especially being a novice in the domain of graph theory and JSON files, was decidedly the most arduous aspect of this challenge. Confronted with a multidirectional graph inundated with thousands of nodes and links, some of which housed perplexing special characters, I found myself facing a steep learning curve. The graph's complexity and scale were initially overwhelming, providing a tangible representation of the adage, 'learning to swim by being thrown in the deep end.'

Nevertheless, amidst these formidable obstacles, I found an invaluable ally in Observable HQ's table and chart visualizations. These tools offered me a bird's eye view of the graph, simplifying the complex sea of data into more manageable pieces. The visual representation enabled me to comprehend the fundamental structure and relationships within the graph, eventually becoming instrumental in my ability to navigate and analyze the labyrinth of data.

Data cleaning posed an additional set of challenges, demanding from me both patience and analytical prowess. The task involved parsing through convoluted nodes teeming with special characters, alongside a variety of UUIDs for locations and other data points. To simplify the graph, I turned to regular expressions as a filtering tool, striving to remove superfluous data. This process, while daunting, was ultimately rewarding as I witnessed my graph simplifying after each iterative cleaning step.

In terms of tools and resources, Observable HQ proved instrumental for D3 visualizations. It empowered me to use a variety of filters, color-code nodes and links, and perform several other operations that enhanced my understanding of the graph. This detailed visualization, coupled with an intuitive interface, was pivotal in my ability to pinpoint illegal entities and extract crucial insights for my graph analysis.

As I reflect on additional resources that could have been beneficial, I think of tutorial-based assistance. Given this was my inaugural foray into graph analysis and visualizations, having access to practical tips, tutorials on using the platform, and guidelines on interpreting complex data could have expedited my learning curve. These resources, I believe, would not only have served me but also other beginners attempting similar challenges. A curated guide that walks through graph visualization tools, strategies for understanding complex datasets, or techniques for managing multidirectional graphs would certainly be a valuable asset.

In conclusion, despite the hurdles, I consider this challenge as a significant milestone in my academic journey. It was indeed a litmus test of my ability to learn and adapt, and I'm gratified with my progression. Although it was a dive into the deep end, I surfaced with newfound knowledge and skills, which I am excited to apply to future data visualization and analysis projects. I look forward to further adventures in this intriguing world of data, continually learning and pushing the boundaries of my understanding.