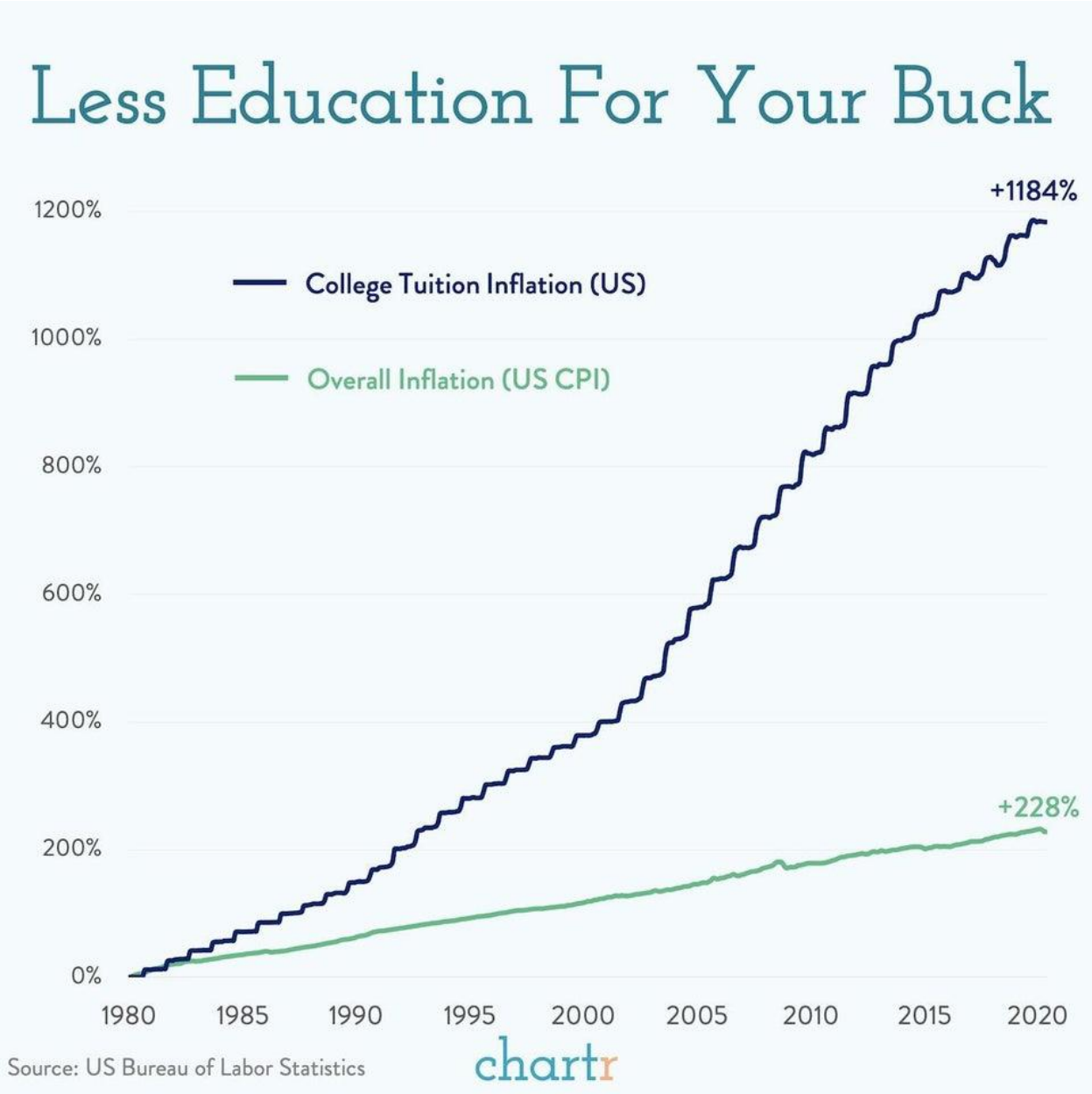
Education and its impact on the US Economy



According to Student Loan Tracker the total amount of all the student loan debt owed in the United States of America has reached an astonishing amount of 1.75 trillion dollars as of 2021. This humongous amount makes up 76% of the Gross Domestic Product of the country. In this blog, I talk about the visualization above which was published by u/chartr in the r/dataisbeautiful subreddit depicting the Inflation in College Tuition and Overall Inflation from 1980 and will try to

draw conclusions for the 1.75 trillion Dollar debt from this graph. The line graph consists of two very Interesting stats recorded from 1980 by the US Bureau of Labour Statistics. The first stat in green is the overall Inflation of the USA's currency and the second stat in blue is the College Tuition Inflation. The currency has seen an increase of 228% from 1980 and the college tuition has seen an astounding increase of 1184% from 1980, to put this stupendous rise to perspective, a student attending college to pursue a degree in 2020 will have to shell out 11.84 times the amount that the previous generations would've paid for the same degree in 1980's. This leaves the students currently pursuing a degree with no choice but to opt for student loans which will in turn lead to an increase in the ever increasing student loan debt.

Graph Analysis:

Now that I've explained the features of the graph and what the graph is presenting, I will now move onto analyzing the graph in detail by drawing comparisons from the book Beautiful Visualization by Noah Iliinsky and Julie Steele which has a range of concepts to Judge or Analyze a graph with many classic examples. These concepts are quite generic with respect to concepts explained by other experts in the field and hence are also agreed upon by the other experts as well. The first chapter in the book starts off by trying to define the meaning of beauty in the context of visualization and it has been stated by Iliinsky(2021) that the four key aspects by which a visualization can be called beautiful are **Novelty, Information, Efficiency** and **Aesthetics**.

Line graphs have been around for ages and continue to be used in today's world of data visualization quite often. By no means is the line graph above new and original which may seem like it's not **Novel** enough but I would argue that the type of graph is not that important as long as the information that it conveys is clear and effective. In my opinion the graph in question does a very good job at conveying the **Information** by differentiating the two stats with the use of two colors and labeling the end of the lines to accurately represent the rise in both the stats being measured at the end of year 2020. Additionally when you look at the College Tuition Inflation line metaphorically, the change in college tuition through the years looks like an ever increasing staircase and the size of the steps increases as the years go by. In the same metaphorical sense a student seeking to pursue a college degree after the year 2005 will have to climb much taller stairs when compared to a student willing to pursue a college degree in the 80's.

Along with these features the chart does a pretty good job at being **Efficient** as the chart is not too complex with unnecessary information and has a clear, well defined goal in the title of the graph which will make the reader understand what the graph is trying to convey without having to examine the graph in detail for a long time. Efficiency is also quite interdependent with the **Aesthetics** as in from Aesthetics point of view less is usually more and there's not much clutter in the graph plus the rise in American Dollar is aptly depicted by a green colour which in my mind is the go to colour when someone mentions the American Currency. A Darker shade of blue is used to depict the inflation which is contrasting to the green colour and can be easily differentiated. Additionally the choice of colours can also be differentiated by a colour blind person(P.S I have only verified this through a colour blind vision simulator, I don't know if it's actually colour blind friendly). Now that the chart satisfies almost all the conditions for it to be called beautiful, I would consider the chart to be beautiful. But does that mean that the chart is

Perfect? Nope. Like all the charts that have been produced in recent history this one also has its flaws. One flaw that this chart has is it somewhat lacks context. The real median household income has been steadily increasing from 1980 as this economic research website reports and the creator of this graph could have included this in his chart. Let me be clear here. I'm not saying that the Inflation in Tuition Fee is justified just because the Median Household Income has been Increasing since the 80's. I still think that the 1184% increase is just downright ridiculous. All I'm saying is that the author could've included the Increase in Median Household Income in the chart to give us a better understanding of the country's Economy. Another flaw, well I think that this one is not that serious or It might have been accidental and I'm willing to give him my benefit of the doubt is that there could have been markings in the x-axis between the consecutive years so that it could've been easier to find out the Inflation between any two years as it's really not that difficult to count.