NLP For Vis: Designing a Chart to Alt Text Model

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Summary:

We present a design contribution for an NLP model capable of producing a textual description of a data visualization which captures higher level trends in the data. Our design process breaks model heuristics into three stages based on visual salient features and the relationships between geometric and textual elements. While our model pushes the state of the art (SotA) in automated chart descriptions, we have pessimistic considerations for the ethical and functional implications of its use. Our core hypothesis is: Can we assume this SotA model will still fail to adequately meet the needs of people with disabilities? And then, can this assumption help us de-risk this work? Are there advantages to a pessimistic approach in regards to model design and ethical considerations?

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