

1. Generate a new LiveView project with basic auth.
2. After logging in the users should be presented with a simple sidebar layout with two pages: "Your plots" and "Shared with you". Use <https://tailwindui.com/components/application-ui/application-shells/sidebar> as a reference for the general look and feel.
3. On the "Your plots" page the user should be able to create a new plot by inputting a plot **name**, **dataset name** and an **expression**. Where dataset name is a name of a CSV in this repository: <https://github.com/plotly/datasets/tree/master> and expression is a name of a column in that CSV. When the fields are valid a histogram should be rendered on the frontend using plotly.js (<https://plotly.com/javascript/histograms/>).

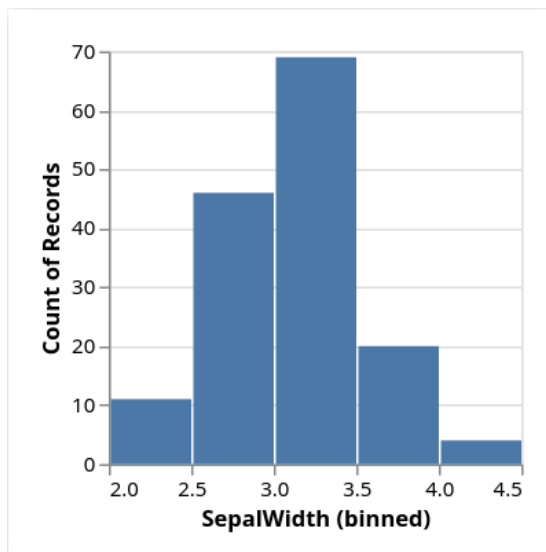
Specifically if the user input is:

Name: My Plot

Dataset name: iris

Expression: SepalWidth

The rendered plot is **similar (not identical, use plotly.js)** to:



<https://vega.github.io/editor/#/url/vega-lite/N4lgJAZgxgFgpgWwIYgFwhgF0wBwqgegIDc4BzJAOjIEtMYBXAI0poHsDp5kTykBaADZ04JAKyUAVhDYA7EABoQAEySYUqUAWBOgtBmx5CBbUgDu1OoyYMIcbVDmY4szJUcICOQW0yCAngSq6naYEATIEM7aBDTaNBduEMQgAL5KyNoA1vpMSNqKIC6OyjSyZGigAB6VIEslaJjaDHBKAGY0cILK+gDKcDhlggDgNMr0aUr+tUhkZNP8zvqODK5pqalAA/view>

4. The user can see the changes to the plot live as they update the fields and save the plot when they're done.
5. Saved plots are rendered on the "Your plots" page.
6. The user can edit saved plots and save them again.
7. A user can click a button to share a plot. This allows them to pick any other existing user to share it with. The plot is now rendered on that user's "Shared with you" page.
8. Only the user who created the plot can edit it.
9. Expressions can be binary operations of numerical columns including +, -, \*, /

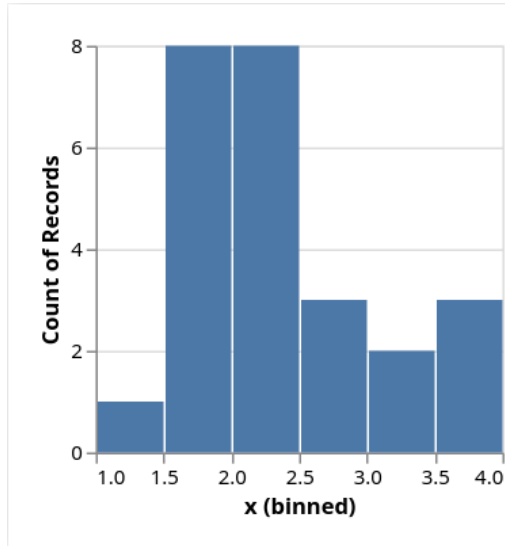
Specifically if the user input is:

Name: My Other Plot

Dataset name: wind\_speed\_laurel\_nebraska

Expression: '10 Min Std Dev' + '10 Min Sampled Avg'

The rendered plot is **similar (not identical, use plotly.js)** to:



<https://vega.github.io/editor/#/url/vega-lite/N4lgJAzgXgFgpgWwIYgFwhgF0wBwqgegIDc4BzJAOjIEtMYBXAI0poHsDp5kTykBaADZ04JAKyUAVhDYA7EABoQAEySYUqUAWBOgtBmx5CBbUgDu1OoyYMIcbVDmY4szJUclCOQW0yCAngSq6naYEATIEM7aBGY0ssoA+hA4cHBjgkg6clKJsnBMphAA1IRQEMQgAL5KmKayEABmbNolaADaoFBIglAMmc76wQwl7QDkAlwADAAEALLxMwDKmMozACJwxGMAujMA1DPDo5OzC7LLSAje6TMAgSRku4ogSBD6AB7VO0rI2sX6JhIbQvFyOZTxMhoUBfTQgJjxNB1BhwJSNGg5ZSfapKfzQ15kMjaPiDdCOBiuapVKpAA/view>

As part of your presentation you may include how you would implement: live updates of shared plots as they are updated by the creator, collaborative editing, more advanced expressions, interactive plots.