

1154-C5-1141 **Virgil U Pierce*** (virgil.pierce@unco.edu), School of Mathematical Sciences, Campus Box 122, Greeley, CO 80639. *Teaching Mathematics with Jupyter and Pretext*. Preliminary report.

For a mathematics course that is built heavily around the use of Jupyter as an in-class tool, such as a Data Science, Mathematical Modeling, or even Linear Algebra or Calculus courses it makes sense to use Jupyter to compose the course notes. The prose surrounding the computations depends on the results of the computation for example, or the figures being produced are dependent on choices made in the computations. Jupyter can even be used as an interactive presentation during these classes.

The resulting notebook files can be easily published via Github or similar services, or exported to PDF or HTML. However, these are unsatisfactory ways of sharing the material for some uses, and one might prefer to bundle the notes into something more like an online textbook. In this presentation we will give an overview of the use of Jupyter as an in-class tool in these kinds of mathematics courses, and then discuss a conversion script for turning Jupyter notebooks into PreTeXt XML files for publishing as an online textbook (nicely formatted for mobile devices). (Received September 13, 2019)