The well-known historic hand-made visualizations that were created in the 18th and 19th centuries by artists such as Charles Joseph Minard, William Playfair, Joseph Priestley, and Florence Nightingale have long been a great source of inspiration for contemporary visualization work. We present a set of straight-forward techniques for the precise ink rendering of lines, hatching patterns, and hatched portraits that we employed in a personal data graphics poster inspired by these 18th and 19th century visualizations.

Our inking technique attempts to emulate the ink lines created by a pen as it is moved over paper. The specific inspiration for the rendering style comes from the font AntiquarianScribe, which we use here and in the personal data graphics poster we created. This font imitates the writing style used by the 18th century cartographer Henri Abraham Chatelain and exhibits many of the characteristics of ink lines that we aimed to replicate.

Hatching patterns were often used in the creation of traditional illustrations to shade and differentiate regions. To simulate this effect we extended our inking class to provide 2D hatching patterns that can be used as fills. We use the inking class to render individual strokes and provide parametric control over the widths, spacing, and variation between the strokes.

We also produce hatched portraits based on black-and-white silhouettes created manually from photographs. We apply two layers of 2D hatching, one with thick beige lines in the background and a second one, at a 90° angle, with thinner black lines in the foreground. Each line of the hatching is clipped to only cover the black part of the source portrait. We apply some random over-shooting (10%) so that short lines only exhibit little variation while longer lines exhibit more randomness.