B-Spline Approximations – Marking Sheet
CS779 W18 Final Project by Kaleb Alway

Base Project

- Approximation scheme using uniform parameterization and the least squares distance

- Optimization process which takes into account degree and number of control points

- UI to draw and view the curves

Bonus Features

- Manhattan distance function

- LogSumExp distance function

- Chord length parameterization

- Centripetal parameterization

- Interface for loading and saving "known curves"

- Fitting known curves to the drawing input by the user

- Two known curve "libraries": one containing 3 simple shapes and one containing letters of the alphabet

- Closed curve detection

- Cusp detection and insertion