**Senior Project Abstract**

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**Dataset:** NOAA GHCN-Daily Version 3

**Abstract:** This project utilizes NOAA’s Global Hourly Climatology database to map daily weather patterns from the past 50 years for the Gulfport area (scope of project may be shorter for dataset size). Using the programming language Python in conjunction with Juptyer Notebooks, our goal is to refurbish the raw data and to develop an algorithm to accurately predict local weather events. Algorithms may be changed or reworked depending on accuracy, and utilization of new weather data. The end goal is to have an algorithm that accurately predicts weather patterns for the coming month. Visual display via heatmap of said algorithm’s classification results will either be shown through Tableau or similar software(s) with the medium of the Flask web interface. Process of implementation will be discussed through a PowerPoint presentation.