Ted Dang
Final Project
GEOG 375
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EXECUTIVE SUMMARY

The objective of this project is to produce temperature data where no data exist and store such data as thematic layers in the form of heating degree days (HDD) and cooling degree days (CDD). Mainly used in energy consumption studies, HDD and CDD are major determinants of energy demand, especially with the portion used for heating and cooling of living spaces. Historical daily temperature from over 500 weather stations scattered throughout California are used as input data. This project performs spatial interpolation turning input point data into gridded temperature datasets. The aim is to produce reasonably accurate annual temperature, as raster structured data, at 10 x 10 km spatial resolution for the entire state. The final products contain smooth contours of data showing heating and cooling patterns independent of political boundaries. This makes it possible for aggregation of temperature data at any geographic units greater than 10 km^2 using zonal statistics procedures.