IMSE 881 Linear Programming

Term Project – Primal Affine Scaling Algorithm

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# Background

The algorithm for this term project is the Primal Scaling Algorithm. All programming results are in the Python programming language. These require Python 3.7+ with an attached requirements.txt file to show what packages needs to be installed in order to reproduce results. Three examples have been selected for analysis. These include reproduction of the example 7.2 spreadsheet, reproduction of lecture 10 handout, reproduction of module 9’s simplex example, and finally a NETLIB LP blending problem. There are three reproduction examples to ensure that the algorithm is working correctly before trying it on real world problems.

# Running the Code

All of the code can be run in Anaconda3 or with a baseline installation of Python 3.7+. It is easiest to install all of the necessary packages using the pip installation manager. Please do pip install -r requirements.txt to get all of the packages cloned into your environment.

# Viewing the Results

It is very simple to view all of my results. Simply double click on the final.html file and it will render in your browser as a webpage. This allows you to quickly see my code as well as the output, instead of re-running yourself. You can re-run it all using `python baseline\_\*.py` for each file in the uploaded zip folder. For more information please read the README.txt if confused.