## **Optimisation with PuLP**

## **Getting Started**

Now you know how to use this wiki, you can begin learning Python and using PuLP by looking at the content below. We recommend that you read The Optimisation Process, Optimisation Concepts, the Introduction to Python and the Introduction to PuLP before beginning the case-studies. The full PuLP function documentation is available here, and the useful functions will be explained in the case studies. The case studies are in order, so the later case studies will assume you have (at least) read the earlier case studies. However, we will provide links to any relevant information you will need.

- 1. The Optimisation Process
- 2. Optimisation Concepts
- 3. Introduction to Python
  - a. Installing Python at Home
  - b. Basic Python Coding
- 4. Introduction to PuLP
  - a. Installing PuLP at Home
- 5. "Walk Through" Case Studies
  - a. A Blending Problem
  - b. A Transportation Problem
  - c. A Transshipment Problem
  - d. A Facility Location Problem
  - e. A Cutting Stock Problem
  - f. Sudoku As An LP
  - g. Column Generation
  - h. Column Generation 2