

Synergizing Cross-Departmental Bio-Optimization
Frameworks to Actualize Aspirational Wellness Vectors
through Innovative Caloric Recalibration Methodologies
and Paradigm-Shifting Nutritional Engagement
Strategies in a Dynamic, Future-Proofed Ecosystem of
Holistic Health Empowerment

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CHAPTER 1

INTRODUCTION

1.1 Objective

Our objective is to formulate a linear program to minimize the grocery costs of our group while maintaining nutritional recommendations and preferences. With this information, we will further algorithmically generate a weekly diet for each member based on their needs.

2.1 Diets

We begin formulating our linear program by agreeing on the dietary restrictions for each group member and their dietary goals¹:

Table 2.1: Weekly dietary requirements.

Diets	Damian	Tyler	Jacob
Protein	204	312	222
Fats	27	56	49
Carbohydrates	143	187	222

2.2 Dataset

We obtained our data by modifying an existing set from Tirthajyoti Sarkar’s [Optimization-Python](#) project under MIT licensing.

¹We calculated our dietary requirements using the [Stupid Simple Macro Tracker](#).