

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 Empowerment¹

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¹Optimization of core competencies was achieved through the implementation of next-generation ideation frameworks, facilitated by advanced language models to drive innovation and maximize stakeholder value proposition (Claude 3.5 Sonnet).

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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	272	294	266
Fats	36	52	35
Carbohydrates	190	176	186
Calories	2174	2350	2125

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](#).