

NIH Portfolio Optimization

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February 10, 2019

Abstract

The code can be found in this Github Repository `NIH_Portfolio`.¹

¹https://github.com/ieshaw/NIH_Portfolio

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1 Introduction

1.1 Problem Description

2 Literature Review

This investigation is meant as an extension of the work of Andrew Lo et. al in *Estimating the NIH Efficient Frontier*[?]. This work applied the work of Markowitz's portfolio optimization [?] to the 7 groups of disease-oriented NIH institutes. We pick up the investigation, investigating the more granular level of individual grants. They found that the years of life lost (YLL) could be expected to decrease if their approach was adopted by funding authorities, but acknowledged the policy and cultural shifts necessary could be less than palatable.

Keeping in mind the quantitatively supported thesis of Katz and Matter's report on the current and forward looking inequality of research funding by the NIH [?], we make conscience effort to not favor or disfavor established principal investigators (PI's). We also thank them for making the data they aggregated to be public, organized, and accessible (**The link is broken on their paper, still trying to find it**).

3 Analysis

4 Proposed Solution

5 Future Work

Appendices

A Keep Math Here?

References