# Entitlement-Based Algorithmic Fairness: Applying Nozick’s Theory of Justice to Automated Decision‑Making

\*\*Author:\*\* Edward Speer

\*\*Course:\*\* Undergraduate Philosophy Thesis (PHIL 4XX)

\*\*Institution:\*\* [University Name]

\*\*Supervisor:\*\* Dr. [Name]

\*\*Date:\*\* 13 May 2025

\*\*Word count:\*\* ≈8 000 words

## Abstract

Algorithms now mediate a widening range of socially consequential decisions, from employment screening to loan approval. Contemporary debates on the fairness of such algorithms largely adopt egalitarian conceptions of justice, operationalised through statistical metrics such as demographic parity or equalised odds. Yet egalitarianism represents only one pole of the distributive‑justice spectrum. This thesis develops an alternative, \*\*entitlement‑based\*\* framework grounded in Robert Nozick’s theory of justice in holdings. I first survey the dominant fairness metrics and explicate the philosophical commitments of egalitarian and libertarian theories. I then formulate a definition of \*algorithmic entitlement justice\* that extends Nozick’s principles of acquisition, transfer, and rectification to automated decision making. To make the definition operational, I introduce the \*\*Entitlement Consistency Index (ECI)\*\*—a quantitative measure that checks whether each algorithmic allocation can be traced to legitimate prior holdings and voluntary transfers, subject to rectificatory adjustments for historical injustice. A detailed case study of algorithmic credit scoring demonstrates how the ECI can endorse distributions that conventional egalitarian metrics condemn, while still flagging outcomes tainted by fraud or coercion. Finally, I anticipate and answer objections concerning historical injustice, informational asymmetry, and the feasibility of implementation. Entitlement‑based fairness, I argue, complements rather than replaces egalitarian metrics and illuminates normative trade‑offs otherwise obscured in current practice.

## Table of Contents

1. Introduction

2. Background

3. Original Argument: Entitlement‑Based Algorithmic Fairness

4. Conclusion

5. References