To Live in their Utopia

To Live in Their Utopia: Why Algorithmic Systems Create Absurd Outcomes

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The promise AI's proponents have made for decades is one in which our needs are predicted, anticipated, and met - often before we even realize it. Instead, algorithmic systems, particularly AIs trained on large datasets and deployed to massive scales, seem to keep making the wrong decisions, causing harm and rewarding absurd outcomes. Attempts to make sense of why AIs make wrong calls in the moment explain the instances of errors, but how the environment surrounding these systems precipitate those instances remains murky. This paper draws from anthropological work on bureaucracies, states, and power, translating these ideas into a theory describing the structural tendency for powerful algorithmic systems to cause tremendous harm. I show how administrative models and projections of the world create marginalization, just as algorithmic models cause representational and allocative harm. This paper concludes with a recommendation to avoid the absurdity algorithmic systems produce by denying them power.

CCS Concepts: • **Human-centered computing → HCI theory, concepts and models.**

Additional Key Words and Phrases: HCI, Artificial Intelligence, Street-Level Algorithms

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1 INTRODUCTION

HCI researchers have spent years working to improve algorithmic systems, and increasingly systems that produce computational models generated by Machine Learning (ML), that designers often use at enormous scales to classify and make difficult decisions for us. Some of that work is exploratory, finding new places and ways to use technologies, and new insights that AI might yield when ML is applied to massive datasets to find relationships in the data [29, 61, 76]. Other work surfaces problems with existing systems and attempts to mitigate those harms (for instance, by making them more fair, accountable, and transparent) [4, 42, 46, 47, 53]. Then there's work that tries to establish productive theoretical frameworks describing the social environments these systems produce and that designers create and foster, in the hope that some ontology or paradigm will motivate theoretically-grounded discussions about where the first two threads of research ought to lead [30–32, 37, 50, 72].

Part of the challenge of all this seems to be that the future we've imagined and promoted for decades, as designers of technical systems, is woefully misaligned from people's experiences of massive computational systems. Many of these algorithmic systems, especially ML systems, cause substantial harms in myriad domains, often surprising the designers of those systems.

Designers of sociotechnical systems have repeatedly built computational systems and models rendering decisions that exacerbate and reinforce historical prejudices, oppression, and marginalization. As designers of systems, our

- Power dynamics insulate AI
- Disempowered stakeholders routinely and consistently get marginalized
- A few examples, download the PDF: `https://al2.in/utopia`

No matter how carefully you curate data or design the modeling system, algorithmic models with outsize power over others will inevitably go off the rails and harm people