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Cover Letter for Discussion Leader

CSW 60876 Research Methods

Paper: [Bargaining with the Black-Box. Designing and Deploying Worker-Centric Tools to Audit Algorithmic Management](#)

General Topic: The paper explores how to give workers more agency and control in a work environment increasingly influenced by opaque algorithmic decision-making.

Specific Behaviour or Activity Studied: The authors introduced the Shipt Calculator, a tool designed to aggregate and analyze gig workers' pay. This tool compares the original payment algorithm for workers (V1) used by Shipt (an app-based grocery delivery company) against a newly introduced black-box algorithm (V2).

Specific Research Questions:

- RQ1: How was the V2 algorithm rolled out to workers? Was it consistent?
- RQ2: Is there a detectable difference in pay between the V1 and V2 algorithm? If so, what is the degree of difference?
- RQ3: How many workers have been impacted by the algorithm change?
- RQ4: Does the new pay algorithm impact some workers more than others?
- RQ5: What is the average hourly pay of workers, before expenses? How does the V2 algorithm impact this hourly pay?

Challenges

- Many of the algorithms used by platforms are considered trade secrets or intellectual property, limiting the ability to audit, reverse-engineer, or share their implementations.
- For modern workers whose jobs involve algorithmically mediated management, surveys are insufficient to audit algorithms or analyze workers' conditions.
- Access data about worker experiences is challenging to collect and retrieve.
- Obtain comprehensive and secure data concerning workers' GPS locations, driving habits, tip records, and overall pay is essential for building a compelling case. However, the daunting challenge lies in collecting all this data entirely and independently from the platform while ensuring its security.

Paradigm

The authors adopted a paradigm centered on the design, development, and deployment of a tool called Shipt Calculator, that aggregates platform worker pay and provides transparency to workers. They present this tool as a case study for a new paradigm called Digital Workerism.

Problem

The problem faced by workers consists of two main aspects: Firstly, they struggle to secure wage and algorithm transparency.

Secondly, recent reports indicate that algorithms used by multiple app-based delivery platforms facilitate digitally-mediated wage theft. For instance, pay algorithms have been observed to effectively divert tips intended for workers by customers.

Importance

As the prevalence of platform-based gig work increases, so does the risk of algorithmically driven management and payment structures that result in opaque working conditions, potentially leading to harmful outcomes. Accessing and reviewing collective data could become an essential resource in the future for regulators and policymakers aiming to gain insights into the overall landscape of platform work.

Claims

The authors designed and deployed a tool called the Shipt Calculator, which gathered payment information from 140 workers in the summer of 2020. They argue that tools like the Shipt Calculator demonstrate the important role of aggregating worker data and how a new paradigm termed Digital Workerism can contribute to creating and maintaining a more balanced platform economy.

State of the knowledge

The paper builds on existing knowledge of tools designed to achieve collective action for worker benefit. These tools include those for predicting and optimizing information worker state transitions, chat-based interventions to prevent cyberloafing, and peer systems for upskilling and improving work quality.

Evidence

The authors compared worker pay under the new payment model. While the results showed an increase in average pay per order, nearly half of the workers experienced an unannounced pay cut during their shifts. Additionally, many workers were assigned shifts that paid below their state's minimum wage. This evidence suggests that an algorithm change impacted worker compensation in ways that would otherwise be difficult to detect.

Story structure

The authors first discuss the inherent design challenges of building worker-centric technologies, particularly for workers in informal organizations. They then describe the design process behind their Shipt Calculator, including the lessons learned during development. Finally, they present the results of using the Calculator to audit an app's shift pay model transition to a "black box" model (V2) using worker-contributed data.