



NSF FW-HTF-R #2128954: Preparing hospitality workers and workplaces for the future of automation

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Context:

- Automation in the hospitality industry continues to rise dramatically.
- The pandemic has resulted in increased automation; trend is expected to continue after the pandemic subsides.
- Workers who are affected are largely female, lower SES, and underrepresented groups.

Approach:

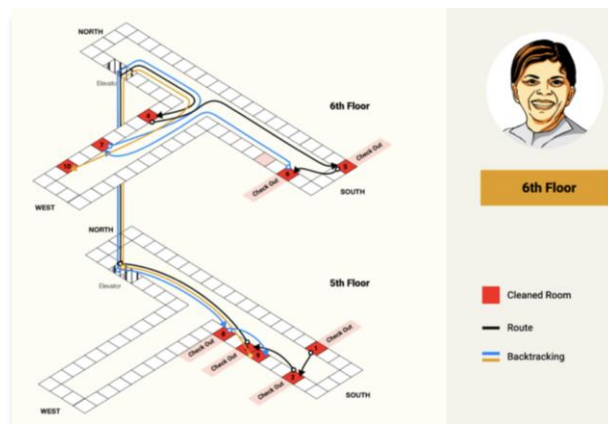
- Our work seeks to address the lack of worker voice on the impact of future automation in the hospitality industry
- We seek to make suggestions for future work: job quality, job satisfaction, training materials, and career progression.
- We are partnering with UNITE HERE, the largest hospitality union in the US.

Process:

- Understand the current state of union hospitality workers, hospitality work, and automation technology.
- Iterative co-design of technology deployment models
- Identify jobs skills, workforce needs, and training materials to prepare management and workers to succeed in an increasingly technologically enhanced workplace
- Evaluate outcomes to understand how they impact the future of work.

Work to date:

- Workshops with UNITE HERE members:
 - Algorithmic managers for housekeeping
 - Automated bartenders for casino staff
 - Mobile ordering for stadium runners



- Workers value providing face-to-face service
- Evidence of labor shifting: intensification of physical labor, reduced time for the social work that is prized in hospitality service
- Frustration at lack of training on new systems
- Felt loss of agency
- Had ideas for how to better design and implement new systems
- Ongoing meetings with developer of hospitality applications for housekeeping
- Searching for matched hotels to conduct fieldwork

Outcomes we will investigate:

Technology	Autonomy	Intensification of work
Perceptions of usefulness & effectiveness Training & rollout	Say over work Skill utilization Developing own abilities	Sequencing Role clarity Working hard & fast
Social interactions	Psychological wellbeing	Voice & input
Supervisor relationships Coworker relationships Guest interactions	Job satisfaction Intimidation & stress Pride at work	Input into tasks Input into technology Input through union Support from managers

Next steps:

- Mixed-method, sequential research
- Deploying large-scale survey
- Conducting observations of work on hotel properties
- Conducting user enactments with demonstrational prototypes of future worker-driven technology systems
- Exploring/prototyping ways to create new roles and new training systems

Co-investigators:

- Sarah Fox, Chimmay Kulkarni, and Franchesca Spektor, CMU
- Ben Begleiter; Ezra Awumey, Edward Wytkind, UNITE HERE
- Ellen Mutari and Deborah M. Figart, Stockton University
- Christine Riordan, University of Illinois
- Hye Jin Rho, Michigan State University
- Elizabeth Stringam, New Mexico State University