#### Ethics of Automation

Elizabeth Fuller, Peter Mckay, Nisansa De Silva, Gautam Sondur, and Brad Green

March 7,2016

### Table of Contents

- Introduction
- Automation and Labor
  - Net Impact on Job Market
  - Solutions to Impeding Problems
- Ethical Questions in Automation
  - Responsibility in Automated Systems
  - Trust in Automated Systems
- Questions

#### **Ethical Automation: Introduction**

- A note on Labor
- A brief review of the industrial revolution(s)
- The Big Questions:
  - We know automation destroys jobs. How many does it make?
  - What do we do when people lose their jobs?

Ethical Automation: will automation create net job loss?

## Ethical Automation: proposed solutions to job loss



### Ethical Automation: A brief aside

- From Worker to Product
  - We've talked about a worker being replaced by a machine
  - How do we talk about those machines?
- What is Responsibility?
- The Big Questions:
  - When an automated machine fails, who is responsible?
  - What kind of failure is acceptable?

# Ethical Automation: Responsibility in Automation

Responsiblity

# Ethical Automation: Responsibility in Automation

# Self-Driving Cars

• The manufacturer is liable for failure, not the user

# Ethical Automation: Responsibility in Automation

# How Safe is Safe Enough?

424,331 autonomous miles. . . with a catch

- "Safety Driver"
- Relinquished Control
- Emergency Intervention

Is it Moral to Trust the Morality of a Machine?

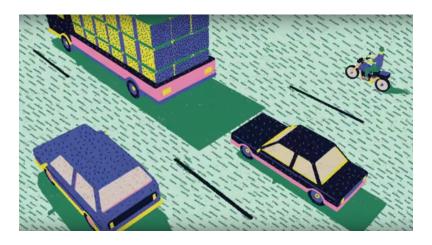


Figure: An Ethical Scenario.

#### Reaction vs Decision

Humans react while machines decide



Figure:

#### Conclusion

These moral dilemmas are too complicated and too controversial to decide



•

#### **Ethical Automation: Conclusion**

- Consequences of automation
- Big changes are coming
  - We've got to talk about it now,
  - We've got to to talk about it a lot.

### **Ethical Automation: Conclusion**

Questions?