

# Ethics of Automation

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# 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



- 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?

## Responsiblity

## Self-Driving Cars

- The manufacturer is liable for failure, not the user

## 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?

# Ethical Automation: Trust in Automation

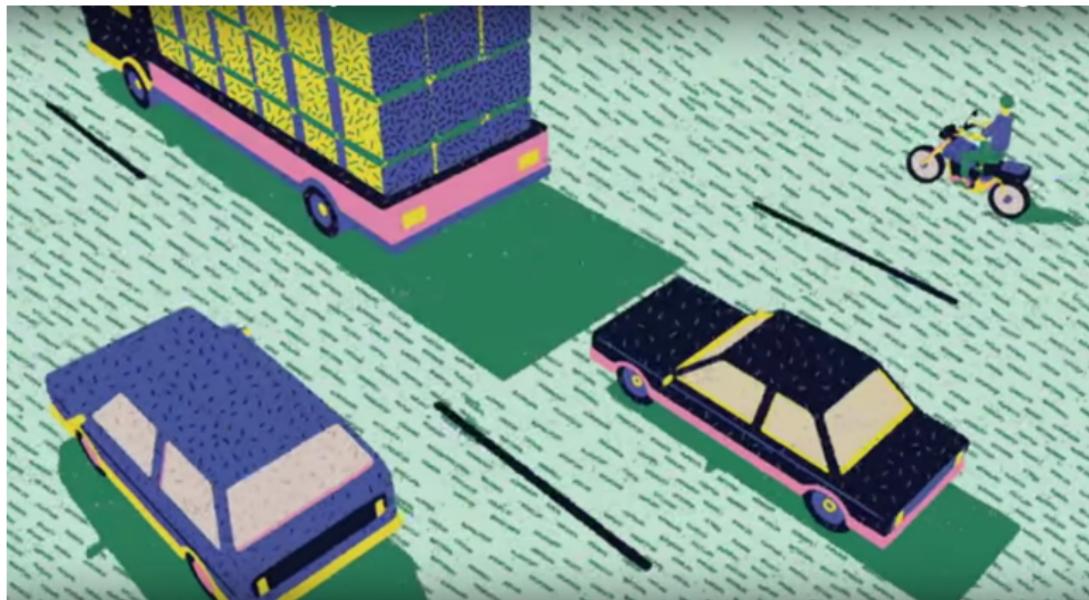


Figure: An Ethical Scenario.

## Reaction vs Decision

- Humans react while machines decide

# Ethical Automation: Trust in Automation



## Conclusion

- These moral dilemmas are too complicated and too controversial to decide

# Ethical Automation

## Self-Driving Cars

- Do you watch cop shows, crime drama and action flicks?

## Reaction time!

- Human reaction time is 2.3 seconds
- Airplane 45 seconds
- Car 2.3 seconds

This is not enough time for;

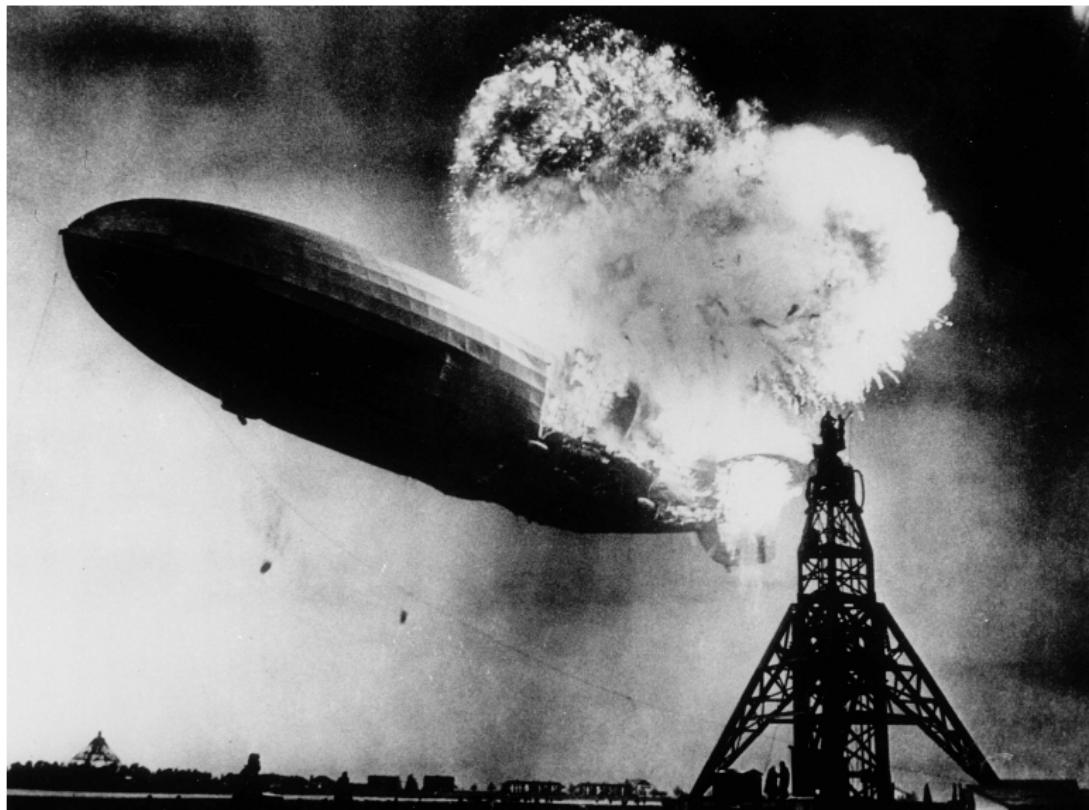
- A human to realize something is wrong.
- Decide what to do
- Take over control
- Take action

Driver or AI?



# Ethical Automation: Trust in Automation

Mass paranoia?



# Ethical Automation: Trust in Automation

Are we asking the right questions?



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

Questions?