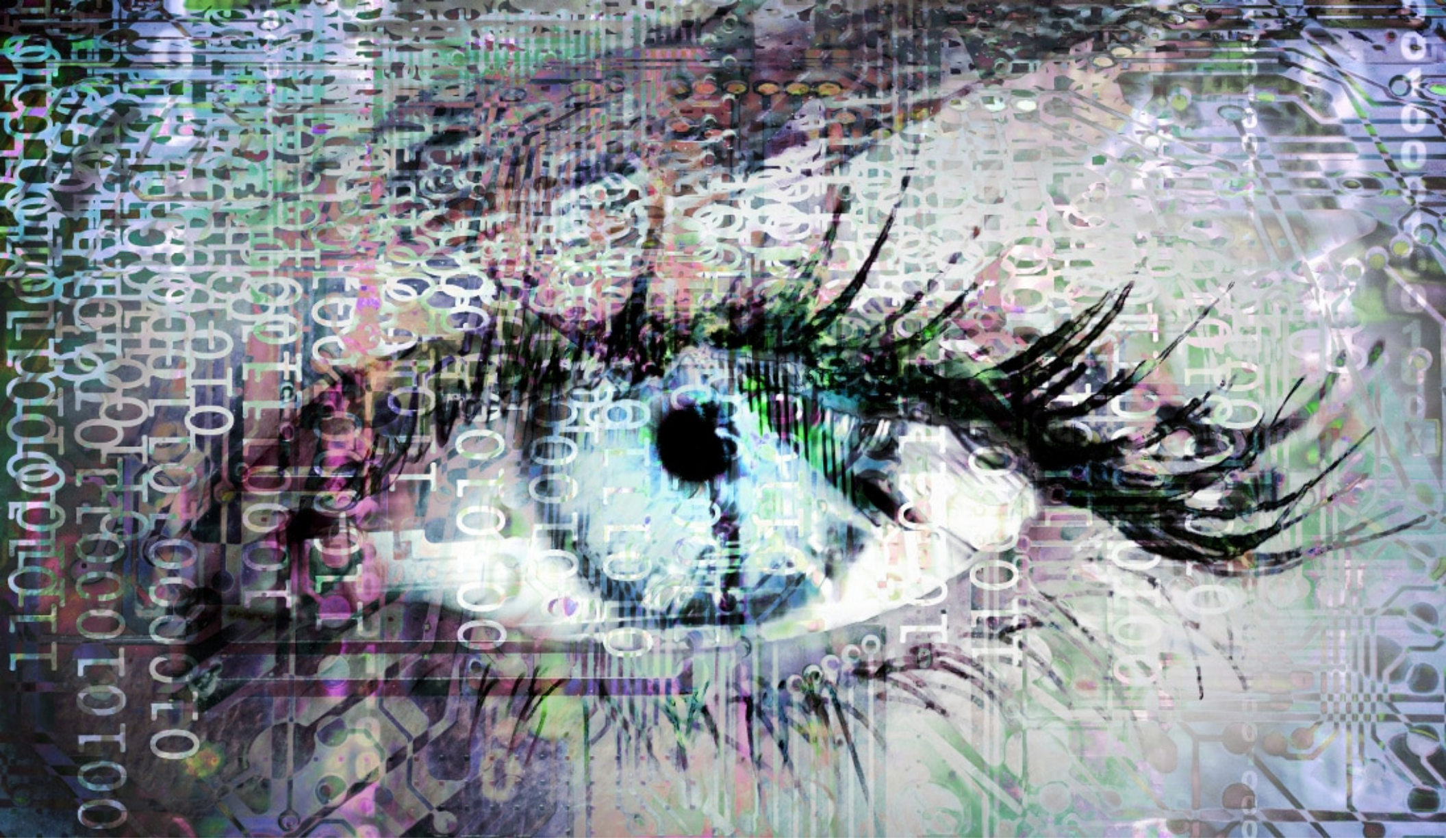

Automation

Is too much of a good thing bad?

maybe

Designer: Fred Zulueta
GD 155 Fall 2017

Automation

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yes

Postmates use food delivery bots to send food to their customers all over Washington DC

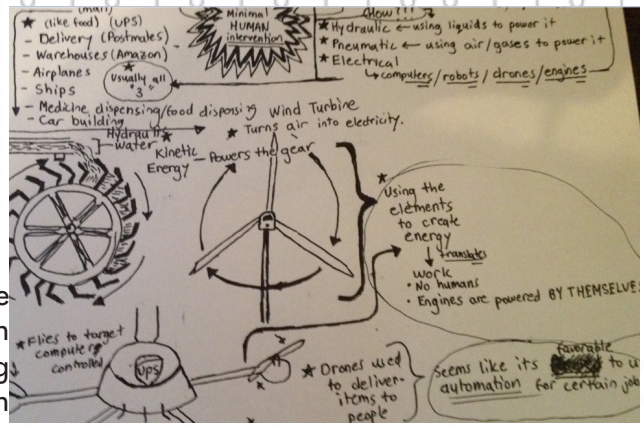
Automation

The definition of automation is “automatic control” meaning something is functioning by itself, usually doing some specific action. The action is determined by a “control system” which is something that commands, manages, directs and regulates the behavior of other devices or systems. Contrary to popular belief there is human interation with automation! Although limited humans usually start up the automation process by tinkering the control system in order to tune the settings for functionality or even help robots and direct them. Humans will usually oversee if the process is going the way it should be and fix any errors if there are any if the robot goes wry.

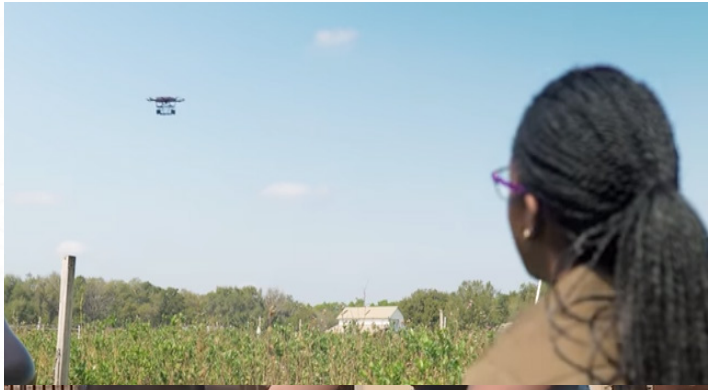
A worker about to start automation by using a control system; humans are actively involved.

What's involved in this?

In the previous page I stated that humans were involved with the automation process by providing support for the devices, but what of the actual devices? What is getting the objectives done? Well in order to explain that we need to understand what type of scenario is involved. All 3 of the pictures on the left have different types of mechanisms to accomplish something. The drone on the first picture is built to fly to it's target dropping mail off, the robot on the second picture is a robot on wheels designed to travel to it's target dropping off food, and the third picture is a giant sorting shelf designed to sort and organize stuff in order for them to be shipped off to it's correct destination. The point is that depending on the situation a different device will be involved with the automation process. Whether if it's a drone or a steam powered engine it varies from situation to situation. Designs match the environment like how evolution matched us to adapt to our environment.



Designs of a device that will partake in automation will vary depending on the situaiton



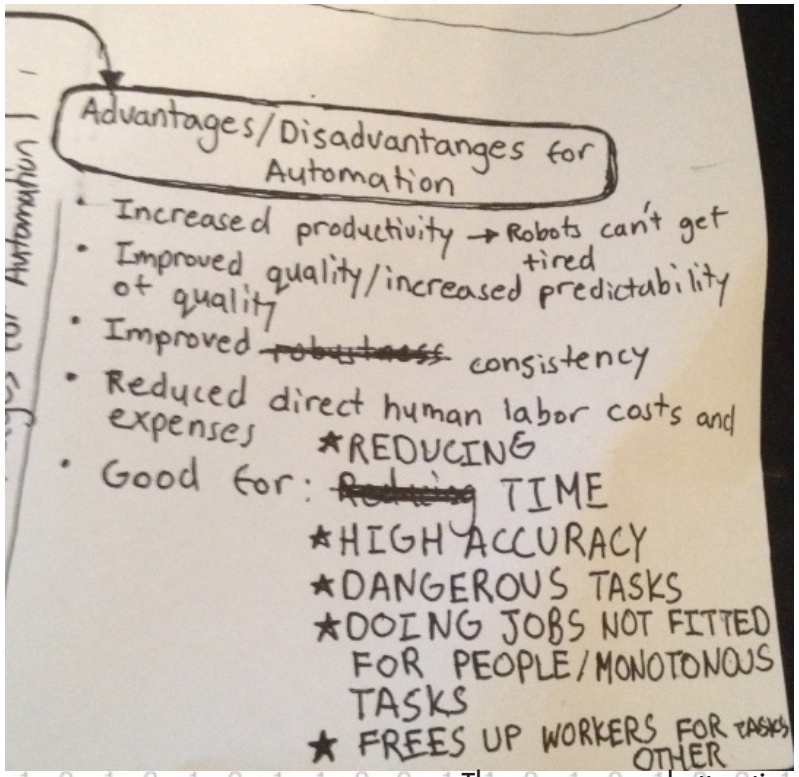
Devices/Machines in the automation process come in a variety of all shapes and sizes

Pros for Automation today

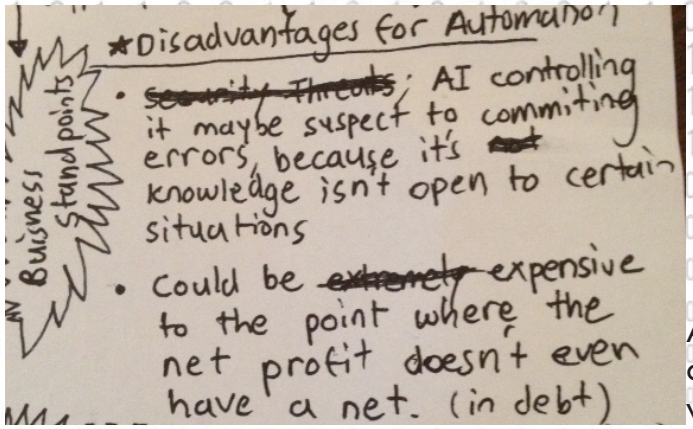
From a buisness standpoint this is really attractive because you'll have increased productivity. Time is money and robots can't get tired. There will be increased quality and predictability since robots are programmed to do things without fail. Predictability is always wonderful to have for running a buisness. Also there's reduced human pay so they don't have to worry about that.

Cons for Automation today

There are upsides and there are downsides to decision making and although automation seems perfect it's far from it. The AI within it's control system could be suspect to errors in situations which could create catastrophic mistakes! Also it could be too expensive to the point where you would lose money in your buisness rather than making capital.



There are several attractive advantages for automation



A certain level of risk is involved no matter what business you partake

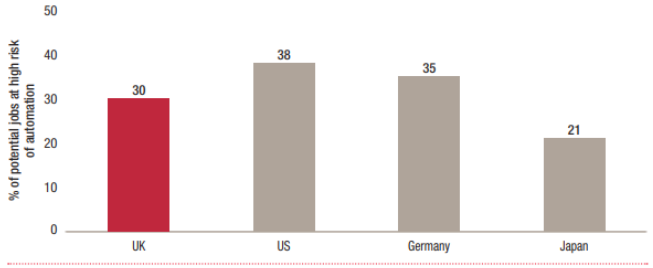
Robots will take our jobs

From an ethical standpoint is this the best way to go around doing things? With new innovations coming and with things being more efficient and sound some individuals will say of course it is. Automation could make life even easier for people and could give us more time to do more important things, but what about the human workers that get laid-off or fired because of the machines? Also who is to say that the future won't be run by robots controlling everything we do? Automation is inching closer and closer to that reality and we're letting it happen. What a predicament we have in store for the futre. According to research done by PricewaterhouseCoopers (PwC) a data and analysis firm the US will lose up to 38% of it's jobs to automation effecting 56% of the workers in transportation, 46% of the workers in wholesale, and 44% of those in retail. This data suggests that automation is already injecting itself into our economy and at a alarmingly fast rate. What could happen 100 years from now if this keeps on going? It's scary to even fathom but in any case it appears that automation can do it's job pretty effectively and I hope a good solution can come from this.

Key points

- Our analysis suggests that up to 30% of UK jobs could potentially be at high risk of automation by the early 2030s, lower than the US (38%) or Germany (35%), but higher than Japan (21%).
- The risks appear highest in sectors such as transportation and storage (56%), manufacturing (46%) and wholesale and retail (44%), but lower in sectors like health and social work (17%).
- For individual workers, the key differentiating factor is education. For those with just GCSE-level education or lower, the estimated potential risk of automation is as high as 46% in the UK, but this falls to only around 12% for those with undergraduate degrees or higher.
- However, in practice, not all of these jobs may actually be automated for a variety of economic, legal and regulatory reasons.

Figure 4.2 – Potential jobs at high risk of automation by country



Sources: ONS; PIAAC data; PwC analysis

Table 4.2 – Employment shares, estimated proportion and total number of employees at potential high risk of automation by UK worker characteristics

Worker characteristics	Employment share (%)	Job automation (% at potential high risk)	Jobs at potential high risk of automation (millions)
Gender:			
Female	46%	26%	4.1
Male	54%	35%	6.3
Education:			
Low education (GCSE level or lower)	19%	46%	3.0
Medium education	51%	36%	6.2
High education (graduates)	30%	12%	1.2

Sources: PwC estimates using PIAAC data