**Personal Information**

When I was a child, my father taught me how computers worked. Which sparked my interest in IT. I would often help teachers ay my primary and later secondary school with computer related problems.

**Ideal Jobs**

My Ideal job is a System analyst

- Adam.W – Sys Admin

- Jay.H - Computer engineer, hardware design/electronics

- Jacob.K - Software dev, code

- Patrick.J - System analyst, data analyst - db

- Patrick.M - Proj Mgr, Sales

**Robots**

**What does it do?**

https://www.bostondynamics.com/handle

https://www.bostondynamics.com/atlas

<https://www.bostondynamics.com/spot>

https://www.bbvaopenmind.com/en/technology/robotics/the-age-of-collaborative-robots-cobots/

Humanoid robots

Cost reduction

Robots in security

Soft robotics, temp structures

Robot’s today, are more suited to doing monotonous repetitive tasks that a person would do less precisely or which could injure or endanger humans if they were to perform that particular task. The advent of AI in collaboration with sensors means that the robots are able to develop datasets from sensor data, that will enable to learn and improve on a task. An example could be an object which isn’t precisely where the robots expects it to be, the AI and data will assist the robot in working out where the object will be and the robots will learn to expect it to be in that location.

There are vast developments going on in the world of robotics today. I’ve chosen to talk about two significant developments. Soft robotics and Robots in the works place (collaborative robots).

Soft robotics take advantage of the mechanism of organisms and aim to emulate them in a non-rigid way by using materials with the properties of living tissue (e.g.; stretches and squashes rather than pivots). Currently soft robots use fluids such as air pumped into small pockets which expand under pressure similar to balloon inflating and deflating. Via stiffening part of the material, the machine can be made to move in a particular direction, similar to the motion of an actuator or piston.

Soft robots are typically created via an additive process (e.g.; adding material to a mould, rather than cutting it down). This enables ‘off the shelf’ solutions such an FDM 3D printing to be used in the manufacturing process reducing costs

The applications for Soft Robots are vast, ranging from climbing robots to wearable robots, but the most significant develops will be in the biomedical field. Soft robots enable an surgeon to operate in a manner that reduces trauma and pain due to their non rigid nature.

Collaborative robots known as Cobots, are robots that can work in conjunction with human workers. Robots in the workplace, do their work fenced away from human workers due to safely issues such as collision/impacts (robots hitting people), but Cobots have an array of sensors which enable them to work alongside human workers. This allows for the human workers to guide the robots through a particular task rather than go through the rigours of complex robotic programming which means that lower skilled human workers can setup the Cobots to perform a new quickly.

The development of each of these systems aren’t mutuality exclusive. They are both aiming to improve safety and assist workers in a similar capacity to a tool, rather than replace them. They both aim to use sensors to give the robot feedback on its environment

Advancements in computing hardware such as microprocessors, memory and sensors enable more complex task to be performed by machines at less cost and advancements in materials engineering enable robots to be built and constructed at lower cost.

The proprietary nature of the current systems could mean that the robotics companies could hold their client’s small business to ransom.

Robots are likely to become faster and more accurate.

**What is the likely impact?**

Robots mean that the current coronavirus wouldn’t be as much of an issue in the future due to the workers no longer need to be in close proximity to each as the robots require minimal intervention. This means that manufacturing can continue throughout a quarantine period.

Cobots will begin to appear in the work warehouses and factories and Soft robots will begin to appear in surgeries and as products

Soft Robot will enable surgeries to be done more quickly, reducing waiting times

These robots, would affect me in mostly in an economic way. Resulting cheaper, higher quality products

AI and computer vision.

And could result in new products and new jobs for people like me

**How will this affect you?**

# Bibliography

Soft Robots

<https://www.liebertpub.com/doi/full/10.1089/soro.2018.0136>

<https://www.frontiersin.org/articles/10.3389/frobt.2018.00084/full>

<https://www.robotics.org/blog-article.cfm/5-Innovative-Applications-of-Soft-Robotics/109>

Cobots

<https://www.technologist.eu/cobots-our-new-partners-at-work/>

<https://www.sick.com/au/en/the-new-mobility-how-sensors-control-the-cobots-of-the-future/w/blog-sensors-cobots/>

<https://www.safetyandhealthmagazine.com/articles/16789-robots-in-the-workplace>

**References**

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<https://www.liebertpub.com/doi/full/10.1089/soro.2018.0136>

<https://www.frontiersin.org/articles/10.3389/frobt.2018.00084/full>

<https://www.robotics.org/blog-article.cfm/5-Innovative-Applications-of-Soft-Robotics/109>

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<https://www.technologist.eu/cobots-our-new-partners-at-work/>

<https://www.sick.com/au/en/the-new-mobility-how-sensors-control-the-cobots-of-the-future/w/blog-sensors-cobots/>

<https://www.safetyandhealthmagazine.com/articles/16789-robots-in-the-workplace>