

My finger hovers over the keyboard, hesitating. When I press the enter key, I spend around 2.5 mJ of energy. That's not very much. It's around a one hundred millionth of the energy in a single Weetbix. But, pressing that key has consequences besides warming up my hand a little. Firstly, a message will fly through the air to my router, and from there it will make it's way to Perth, then along thousands of km of undersea cable, and then onwards to the eastern coast of the USA, where it will give an instruction for 10 000 computers to begin work on my problem. 10 000! I've tested it with 1, 10, and 100 servers, but now management is getting impatient, and I'm being pressured to speed things up a bit. I hold my breath and lower my finger slowly towards the button.

A dying Uncle Ben whispered to a young Spider-Man: "With great power comes great responsibility". We're all ethically responsible for our actions, and when we are powerful, our actions - and inactions - can have much more impact, and so we have an even greater moral obligation to act well. In the last few centuries, humans have gained more and more power. Stone tools added power to our hands. We gained the power of plentiful carbohydrates in the agricultural revolution. In time, oxen, horses, and then steam and oil were bent to our will. After that, for an encore, we tricked rocks into thinking, and now we have computers, which we also gave tools, and called robots. (The word "robot" roughly translates to "forced labour" from the Czech language). Now that humans have collected this impressive menagerie of powerful agents, they should necessarily consider their actions with much more care. But: do they?

GSG

- Arrived in 2008, graduated 2010
- Weird to be at a school celebrating just 10 years of age
- Lots of music, hockey/rowing. Maths was real passion. Had a great time.

35 Degrees South

- Decided to take gap year
- Digging holes, working outside

UWA

- Started with mech eng, robotics, talked into electrical by a friend
- Design and research: drones based, and energy harvesting
- SHL: delivering real solutions for real problems

WGE: concurrent

- Lighting design: working in teams, multiple projects, remote

QuadIQ/Slipstream/Interactive

- Graduate, move down to alban, cricket
- 1 project weekend, 2nd in a couple of weeks. They had a list of problems, I had energy to solve
- QuadIQ/Slipstream/Interactive
- Software projects for cybersecurity

Because there are lots of different students in the room, just want to share a few ideas with the newest minds.

Food: cheap food, food production

- vows
- bulk meal production is cheap and fun
- something we can all be doing
- swapping loaves and eggs, curry for lasagna
- using nice ingredients from people we like using systems we agree with

Energy: car/boat/bikes/homes

- green maker fair: people wanted electric vehicles
- design challenges about grid/homes of tomorrow
- cars as batteries/energy transmission

Technology: AI safety

- Automation: in the home, but also on our phones
- Speech to text
- ChatGPT, DALI
- AI
- 1970s nuclear threat: what do we do?
- AI Commission (Australians for AI Safety)

Each upward step on the technology staircase gives humankind more and more leverage. More than 2000 years ago, Archimedes said: "Give me a lever long enough and a fulcrum on which to place it, and I shall move the world." Our actions now obviously and unavoidably move the world, unfortunately well evidenced by climate change, biodiversity loss, and mass deforestation, among many other adverse effects. Living as we do, with this ability to move the world, perhaps we ought to do some responsible thinking about which direction we should be moving it. I would suggest that although we've done a fair bit of damage over the last couple of centuries, we are poised and empowered to make up for things over the next hundred years. We are ALL going to need to work together to make this work, but looking around the room tonight, I strongly feel that we have every reason for hope.