Brilliant Careers for STEM students in the South West: TouchByte

Employees:
50

Location:
Falmouth

Industry:
Face recognition

What does Touchbyte do?

TouchByte build facial recognition software and hardware, pushing the boundaries of where facial recognition technology can be used. We all have facial recognition on our phones these days—TouchByte's technology goes much further. They've installed facial recognition onto high-security mission control rooms for space and earth stations and bought the sci-fi technology down to earth with facial recognition at construction sites.

What kind of maths does facial recognition use?

Facial recognition is challenging for computers, so the machine learning algorithms that underly modern face recognition technology are extremely intricate. There are a lot of ways facial recognition can work, but normally algorithms are trained to recognise 'landmark' features on a face like a mouth, nose and eyebrows, from which they compute a unique value and match it to a pre-registered image of your face.

Three key questions:

- How do you teach a computer to learn like a human?
- How do you match up software and hardware?
- Can you handle working in a fast-growing tech company?

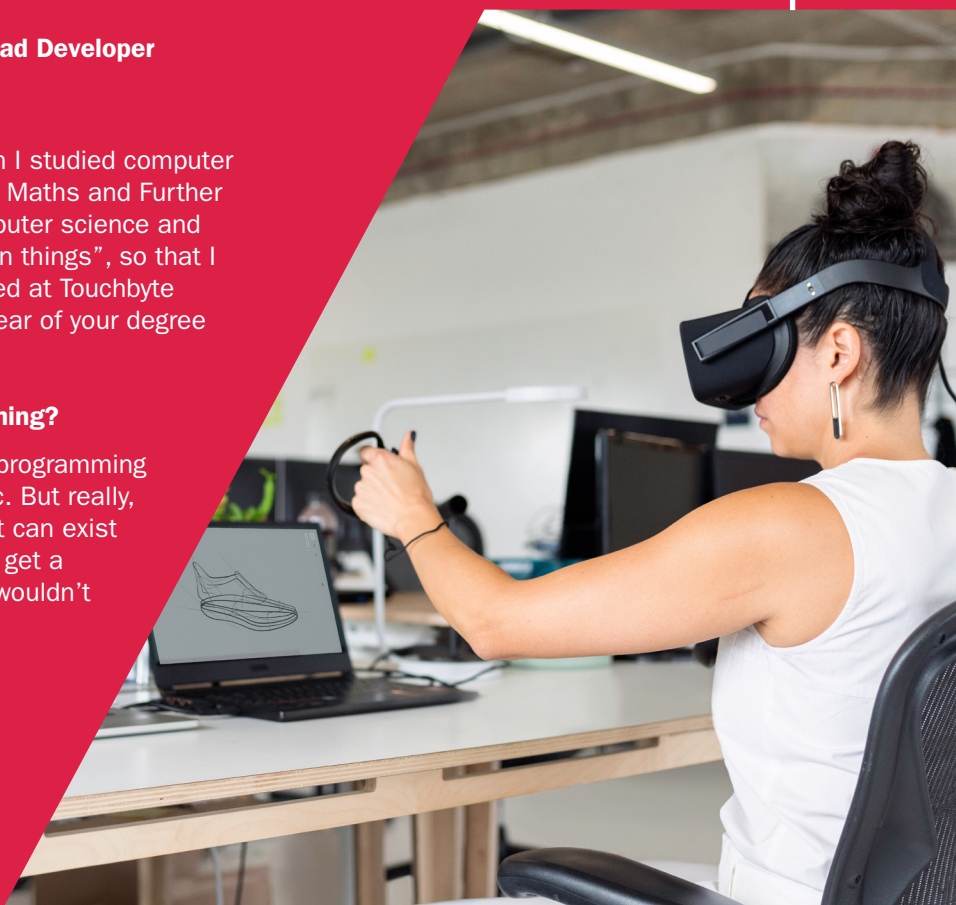
Employee profile: Harrison Hayward-Gore, Lead Developer

How did you get into tech?

My tech journey started with my GCSEs, when I studied computer science and then did Computing, Electronics, Maths and Further Maths at college. At university I studied computer science and spent a lot of time studying how "people learn things", so that I could teach the AI to learn things too. I started at Touchbyte during an industry year (where you spend a year of your degree working) and I've been there ever since!

What is your favourite thing about programming?

At college I learned that a lot of problems in programming can be solved with cold, black and white logic. But really, the great thing about programming is that if it can exist on your screen, you can make it. Every time I get a small victory, I feel like a madscientist. Who wouldn't want that as a career?



How did your tech journey start?

When I was in Year 9 my school ran a special ICT course. For my GCSEs I essentially replaced PE with computer science, which I was pretty chuffed about! If I'm honest, this didn't inspire me to go into tech. But, it taught me the side of computing that I didn't like – so I knew word processing and basic IT wasn't for me.

Then at college I studied Computing (the programming bit), Electronics (the circuit boards bit), Maths and Further Maths. The relationships that you make with college teachers are very important – they can inspire you to pursue your dreams. I then left college and moved on to university to study Computer Science.

What did you do at uni in your Computer Science degree?

My degree gave me a good flavour of everything, from network security, to databases, to the history of computing, to artificial intelligence (AI). I wrote my dissertation on creating a game which allowed Super Mario to 'play the game himself', using a combination of neural network and evolutionary learning algorithms.

I spent a lot of time studying how "people learn things", so that I could teach the AI to learn things too. AI replicates things that humans do, so having a background or some knowledge into psychology can also be useful in tech and programming.

How did you come to work at TouchByte?

I landed at TouchByte through an industry year during my degree. I Googled "software companies" and found this interesting AI company in Cornwall building facial recognition tech. I called, left a message saying: "do you want an intern", forgot to leave my name and number – but somehow still managed to wind up with an interview, and an internship!