Life in code

Computer science is part of your daily life – even if you can’t see it.

GAME OF HOMES
Robotic vacuum cleaners, such as Dyson’s 360 Eye, clean your home by tracking the floor plan and memorizing their path so they don’t cover the same area twice. You can also program them by smartphone.

CS USED: ALGORITHMS, ARTIFICIAL INTELLIGENCE, SOFTWARE DESIGN

THRASH IT OUT
Players bend reality to their will when building entire worlds in video games such as No Man’s Sky and Minecraft. These games generate unique environments for each player using an algorithm-based method called procedural generation. Lifelike video games, such as Call of Duty and Fallout 4, feature “intelligent” enemies that can respond to, and learn from, player behavior and act unpredictably.

CS USED: PROGRAMMING GRAPHICS SOFTWARE, ARTIFICIAL INTELLIGENCE, CLIENT-SERVER INTERACTION

ANYWHERE, ANYTIME
Online grocery stores, such as Amazon Prime and Netgrocer, can do same-day deliveries to your door and predict which products you like based on what you’ve put in your cart in the past.

CS USED: DATABASES, WEB PROGRAMMING, ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, NETWORK SECURITY, ENCRYPTION

CREATING ANIME
Anime, such as the popular series Kabaneri of the Iron Fortress, has a distinct visual style and innovative production methods. Computer generated imagery (CGI) was first used in the 1960s, and since then, has been continuously refined with digital processes, allowing for more complex and realistic animation.

CS USED: PROGRAMMING GRAPHICS SOFTWARE, ANIMATION, RENDERING, SOFTWARE DESIGN

FITNESS FRIENDS
Fitness apps, such as Fitbit, record your heart rate and track your daily activities via your smartphone. Some fitness apps also have exercise databases that help you plan and log your workouts.

CS USED: DATABASES, USER INTERFACE

BINGE WATCH
Streaming media, such as Netflix and Hulu, allow you to watch a large assortment of films and TV shows on-demand. According to a report from the commercial broadband company Suddenlink, Netflix accounts for more than 37% of North American Internet traffic. What “streaming” services do you use?

CS USED: DATABASES, USER INTERFACE, COMPRESSION ALGORITHMS

ON THE MONEY
ATMs and apps give you fingertip access to cash and account balances without having to stand in line to see a bank teller.

CS USED: EMBEDDED SYSTEM PROGRAMMING, DATABASES, SECURITY, ENCRYPTION

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