

New device can smell bombs and diseases

30th August, 2017



A Nigerian engineer and neuroscientist has created a revolutionary new computer that has artificial intelligence (AI). Dr Oshi Agabi has spent many years trying to make a computer that can smell. He launched his start-up project last year and called it Koniku. He has raised over \$1 million in funding. Dr Agabi said his project is already making profits of \$10 million. Technology giants like Google and Microsoft are very interested in it. The security industry is also keeping a close watch. Koniku could be put in drones and smell bombs and explosives. It could also be used in airport security systems to smell explosives. An additional use could be in hospitals to smell diseases in humans.

Dr Agabi did not base Koniku on silicon chips. Agabi said computers have used silicon for decades, but it is not powerful enough to deal with the maths needed to recognize smells. Instead, he based his device on neurons from the brain of a mouse. Neurons are cells in the brain that share information. They use electricity and chemical signals to process and send information. Using neurons in computers is called biotechnology. Agabi said biotechnology can make devices that can smell. He said: "Biology is technology. Bio is tech. Our deep learning networks are all copying the brain." Agabi added: "We want to build a...system that has intelligence. We do not want to build a human brain. It's not science fiction."

Sources: bbc.com / nan.ng / hundustantimes.com

Writing

Robots with artificial intelligence will never be a danger to humans. Discuss.

Chat

Talk about these words from the article.

engineer / artificial intelligence / computer / project / funding / security industry / silicon chips / decades / device / mouse / biotechnology / learning / networks / fiction

True / False

- a) Two people invented the new device. T / F
- b) The new project has made \$10 million in profits. T / F
- c) The security industry is not interested in it. T / F
- d) The article says the device could make smells in hospitals disappear. T / F
- e) Silicon chips are not powerful enough to make devices that can smell. T / F
- f) The inventor used neurons from the brains of mice. T / F
- g) The use of neurons in computers is called biotechnology. T / F
- h) The inventor wants to try and build a human brain. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|-------------------------|----------------|
| 1. created | a. deal with |
| 2. launched | b. business |
| 3. raised | c. form |
| 4. industry | d. started |
| 5. additional | e. brain power |
| 6. base | f. made |
| 7. powerful | g. gadgets |
| 8. process | h. got |
| 9. devices | i. extra |
| 10. intelligence | j. strong |

Discussion – Student A

- a) What do you know about neuroscience?
- b) What do you know about artificial intelligence?
- c) What do you think of computers that can smell?
- d) How important are computers?
- e) How important is artificial intelligence?
- f) How useful is a computer that can smell?
- g) How could computers that can smell fight terrorism?
- h) Would you like a computer that can smell?

Phrase Match

- | | |
|--|-------------------------|
| 1. created a revolutionary | a. chips |
| 2. artificial | b. up project last year |
| 3. He launched his start- | c. biotechnology |
| 4. his project is already making profits | d. security systems |
| 5. It could also be used in airport | e. in the brain |
| 6. silicon | f. new computer |
| 7. Neurons are cells | g. fiction |
| 8. They use electricity and chemical | h. intelligence |
| 9. Using neurons in computers is called | i. signals |
| 10. science | j. of \$10 million |

Discussion – Student B

- What do you think about what you read?
- How useful are silicon chips?
- What do you think of the new neurons computer?
- What do you know about biotechnology?
- How difficult is it for a computer to copy the brain?
- What do you think of science fiction?
- How much is life like science fiction?
- What questions would you like to ask Dr Agabi?

Spelling

- irfacialti intelligence (AI)
- raised over \$1 million in dgunifn
- making ospfrti of \$10 million
- The usrtyiec industry
- smell bombs and ilpsevsoe
- smell adessies in humans
- nilscoi chips
- for ecdsaed
- srcpoes and send information
- make edievcs that can smell
- Our deep learning trekwosn
- It's not science tcoiifn

Answers – Synonym Match

1. f	2. d	3. h	4. b	5. i
6. c	7. j	8. a	9. g	10. e

Role Play

Role A – Biotechnology

You think biotechnology is the most important kind of technology. Tell the others three reasons why. Tell them what is wrong with their technology. Also, tell the others which is the least important of these (and why): food technology, weapons technology or sports technology.

Role B – Food Technology

You think food technology is the most important kind of technology. Tell the others three reasons why. Tell them what is wrong with their technology. Also, tell the others which is the least important of these (and why): biotechnology, weapons technology or sports technology.

Role C – Weapons Technology

You think weapons technology is the most important kind of technology. Tell the others three reasons why. Tell them what is wrong with their technology. Also, tell the others which is the least important of these (and why): food technology, biotechnology or sports technology.

Role D – Sports Technology

You think sports technology is the most important kind of technology. Tell the others three reasons why. Tell them what is wrong with their technology. Also, tell the others which is the least important of these (and why): food technology, weapons technology or biotechnology.

Speaking – Smells

Rank these with your partner. Put the most important things for computers to smell at the top. Change partners often and share your rankings.

- | | |
|---------------|--------------|
| • burglars | • explosives |
| • bad food | • diseases |
| • bad perfume | • bombs |
| • weather | • gas leaks |

Answers – True False

a	F	b	T	c	F	d	F	e	T	f	T	g	T	h	F
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Answers to Phrase Match and Spelling are in the text.