The AI-powered app that reminds you to eat your veggies

Fri, 2020-01-03 01:48

DUBAI: Doctors can diagnose nutritional deficiencies in several ways, going by symptoms such as pale skin, brittle nails, muscle weakness and fatigue.

Now a team of engineering students from Ajman University in the UAE has made it possible for anyone to discover what vitamins their body lacks and take corrective action simply by using a smartphone app.

Vita-Cam employs a combination of artificial intelligence (AI) models to evaluate a person's vitamin profile from photos of their eyes, lips, tongue and nails.

It then points out nutritional deficiencies and suggests corrective dietary changes and supplements. The app will not only tell you to eat your vegetables (and fruit) but explain why and what they can do for you.

Pending approval from the UAE Ministry of Health, it is expected to hit Google Play and iOS stores in early 2020.

"With recent advancements in research, the scientific community has become more aware of the relationship between vitamin deficiencies and many unfortunate health complications," said Ahmed Saif Eldeen Khalil, an electrical engineering graduate student who created the app with a team of colleagues.

"But costly and skin-invasive detection methods may discourage individuals from seeking medical checkups, which provides an opportunity for technology to fill the gap and formulate alternative methods."

His collaborators include fellow students Saif O.S. Alghlyayini and Mohamed Ait Gacem, and teaching assistant Wessam Shehieb.

Dubbed by Khalil a "portable doctor," the app has snatched a number of awards since its inaugural presentation earlier this year.

In March, the team behind Vita-Cam won the UAE hackathon, and in October, it was selected as the UAE's entry for the James Dyson Award, an international student design competition organized in 25 countries.

The winning team will receive 140,000 dirhams (\$38,114) in cash. The UAE is the only Middle Eastern country to be represented, with the winner to be announced this month.

At present, the app tests for a broad spectrum of B vitamins, vitamins C and A, iron, zinc, calcium and magnesium levels, Alghlyayini said, adding that the team hopes to expand the detection range by integrating more body parts.

As is common with AI solutions, the app will broaden its coverage of vitamins and diseases with increased use.

"Our solution is not a replacement for medical consultation, but it is a tool designed to boost the community's awareness of their nutritional needs and prevent health complications caused by untreated deficiencies," Shehieb said.

UN data points to micronutrient deficiencies affecting some two billion people worldwide, many of whom suffer acute and chronic illnesses as a result.

In the Middle East and North Africa, malnutrition affects the most vulnerable communities in the least developed countries, as well as in advanced nations where overweight individuals do not get enough of the right nutrients.

Aggravating the problem is the shortage of medical professionals — the World Health Organization says the regional average of 2.3 healthcare workers per 1,000 people is insufficient to achieve even primary healthcare coverage.

Technological solutions such as Vita-Cam could go a long way towards bridging the gap by giving patients easy access to diagnostic tools. Several apps for diagnosing different conditions are in development around the world, but only a couple target similar conditions.

Vita-Cam is among the most innovative solutions and certainly the least expensive one so far.

The prototype, which was developed in three stages over six months, is compatible with most contemporary smartphones, whose cameras meet the minimum resolution requirements for a successful health analysis, even in variable light, says Gacem.

"We also included a set of instructions for the user to remove any obstacles that may interfere with the analysis, such as nail polish and eyewear, as well as an explanation of the minimum light intensity required."

The launch version of Vita-Cam will be free, but feature advertisements from dietary supplements brands.

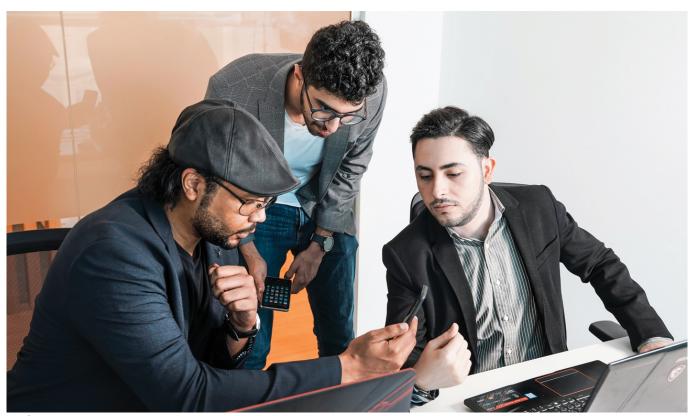
Future versions could be sold to medical institutions, and the team is working to establish cooperation with hospitals and research facilities, including the college of medicine and pharmacology at Ajman University.

Prof. Mustahsan Mir, executive director of Ajman University, believes the app will be a game-changer and perhaps even save lives.

"Unlike many other healthcare gadgets, Vita-Cam will be accessible to audiences all over the world for a free diagnosis of vitamin deficiency," Mir said.

"Early diagnosis is the key to better public health."

This report is being published by Arab News as a partner of the Middle East Exchange, which was launched by the Mohammed bin Rashid Al Maktoum Global Initiatives and the Bill and Melinda Gates Foundation to reflect the vision of the UAE prime minister and ruler of Dubai to explore the possibility of changing the status of the Arab region.



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<u>Middle-East</u>

Tags:

UAE

artificial intelligence (AI)

Editor's Choice

The Middle East Exchange

How the Arab world's job market can meet the automation challengeAbu Dhabi launches first graduate level research-based AI university internationally

Lebanon bank staff body threatens

strike over assaults, insults

Author:

Fri, 2020-01-03 01:43

BEIRUT: A Lebanese body representing bank workers has threatened to go on strike over the insults and assaults branch staff are being subjected to as the country's financial woes continue.

A liquidity crunch has hit the Middle East country, where months of protests and a political impasse have deepened its economic crisis.

Banks have cracked down on the amount of dollars that can be taken out or transferred abroad. The Association of Banks in Lebanon calls these measures "exceptional and temporary to ensure the continuity of the banking sector's work and preserve the rights of depositors."

But citizens are furious and there has even been violence in bank branches, leading the Council of the Federation of Syndicates of Bank Employees to threaten industrial action.

"The attacks are organized by people who claim to represent the civil movement (that started on Oct. 17) with the aim to distort the image of the banking sector, which is a clear violation of the reputation of the Lebanese state that is responsible for protecting all citizens from any threat against their safety and security."

Some protesters stormed a bank in the city of Sidon to claim people's money. They clashed with security forces and a number of people were injured. The Red Cross took them to hospital for treatment. There was a similar scene in a bank in the city of Nabatieh, where a bank employee tried to shut the door but protesters broke in and there was a fistfight.

Some protestors also organized a sit-in outside the Port of Beirut, considering it one of the "main sources of waste and corruption" in the country. Others rallied in front of the Port of Tripoli and chanted slogans demanding to "stop corruption and cleanse the port from those who are corrupt."

The crisis is still awaiting a political solution for confidence to be restored, notably the formation of a new government.

On Wednesday night, activists on social media called for civil disobedience and road closures, in protest at what they considered "adopting the traditional quotas to form the government and naming ministers who belong to political parties."

Moustafa Allouch, a member of the Future Movement's political bureau, said there were several obstacles hindering the formation of the government and not just the issue of Sunni representation.

"The Sunni issue lies in the fact that the prime minister-designate was named

without the approval of prominent political figures," he told Arab News. "The Future Movement is not concerned with invitations to close roads and can no longer influence the decisions of people in the streets."



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<u>lebanon protests</u>

Activists reject candidates for new Lebanon governmentAs poverty deepens, Lebanon protesters step in to help

An Egyptian portal opens employment opportunities for people with

disabilities

Fri, 2020-01-03 01:40

CAIRO: Work opportunities are hard to come by for the nearly 12 million people with disabilities living in Egypt.

Mindful of the challenges facing such individuals, non-profit organization Ebtessama launched Majidah this year to improve their chances of employment.

"Majidah was born out of our on-the-ground efforts and experience for over 12 years," said Ashraf Osman, chairman of the board of Ebtessama.

"We work on the training, qualification and employment of people with disabilities."

Things have been changing in Egypt over the past couple of years, with both government and non-government bodies trying to improve the working conditions of individuals with disabilities amid numerous challenges.

"There were entities out there (that) wanted to train or hire people with disabilities, but they weren't properly in touch with one another, and the communications were extremely random," Osman, 39, said.

"So, while constantly growing, the numbers of people we were able to help were still far from enough."

Cairo-based Majidah came to life to fix the apparent communications dilemma. "It's a training and employment platform with all different entities that work on qualifying and hiring people with disabilities under one umbrella," Osman said.

Through Majidah, people with disabilities gained access to a service they desperately needed, and it was made possible by virtue of technology.

"Some of them need a special kind of training or preparation to work, and then they need to find a place to hire them.

Workplaces, on the other hand, need to be able to reach people who are suitable for the vacancies they have, as well as an entity to train them if necessary," Osman said.

The online platform connects all these different parties. A person with a disability will register on Majidah as someone looking for a job, mentioning their disability, skills, previous experience and other relevant information.

"It's a smart platform, capable of matching the different parties based on the data collected from each," Osman said.

"The company looking to hire, on the other hand, mentions its vacancies and the desired set of skills. The training entity would add in what trainings it offers and the skills the trainee would acquire." Creating a platform like this was not easy, and financing was naturally going to be the biggest problem.

"Majidah is a new idea. Past approaches were mostly concerned with on-the-ground action, but this was more focused on the future, which made it hard to find funding since most sources felt uneasy backing something that isn't tangible," Osman said.

Thankfully, Vodafone Egypt Foundation stepped in and provided the resources needed to launch the platform.

"The second challenge we faced was making people believe in what we were doing, which was not plausible for many," Osman said.

"Fortunately, because many really needed this and our team worked really hard, we started getting interaction with the platform, and now we have close to 16,000 persons with disabilities registered."

Majidah, whose soft launch took place several months ago, will be fully operational in November, but the future holds more for the platform, including improved communication among all parties to exchange experiences and knowledge.

"We want to provide a lot of services for people with disabilities without them having to go anywhere, things they usually have to move to get," Osman said.

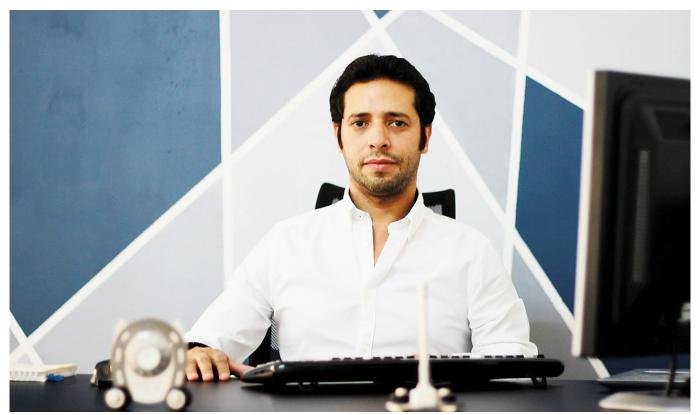
"When it comes to training and hiring people with disabilities, we're all learning and experimenting. So, we need to share the success stories as well as the failures because we'll learn a lot from both."

To continue providing its service, Majidah needs all the support that it can get. "I hope everyone who can help in any way possible in what we're doing steps in," Osman said.

"If we all stand together, we'll truly be able to make a difference.

"We're talking about millions here, and if we all don't do our part, they won't be able to get their basic human right of having a job."

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Editor's Choice

Egyptian swimmer dives into major UN roleEgyptian government seeks to do away with popular tuk-tuks

Rockets fall on Baghdad International Airport injuring several people security unit

Fri, 2020-01-03 01:33

BAGHDAD: Three Katyusha rockets fell on Baghdad International Airport, the military-run Security Media Cell said in a statement on early Friday. The rockets landed near the air cargo terminal, burning two vehicles and injuring several citizens, Security Media Cell added.

- Developing story.



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<u>Iraq</u>

Iraqi protester shot dead as anti-regime rallies continue

<u>Turkey, Iran sign deal to strengthen</u> <u>religious ties</u>

Fri, 2020-01-03 00:56

JEDDAH: Turkey and Iran have agreed to strengthen their religious ties in a new deal signed last week in Ankara between the religious authorities of both countries.

The new initiative — led by Abouzar Ebrahimi Torkaman, the head of Iran's Islamic Culture and Communication Organization, and Ali Erbas, the head of Turkey's Religious Affairs Directorate — includes the translation of theological books, the organization of activities "to strengthen the unity of Ummah," joint publications to combat Islamophobia in the West, cooperation over services to pilgrims, the exchange of religious texts, and an Islamic teaching exchange program.

Speaking at a joint event, Erbas said, "We mobilize all our resources to combat the agitation that is targeting Muslims, and the measures that are

taken by some Muslim countries in the region, which regrettably compromise Muslims' esteem and pride."

The deal has come as a surprise to many, since Turkey is a Sunni state and Iran a Shiite theocracy. The two were once fierce adversaries, during the times of the Ottoman and Persian empires. And the new initiative has sparked concern among Muslims in Turkey who are critical of its potential repercussions in the teaching of Islam. The hashtag #WeAreNotShia was trending on social media in Turkey after the deal was announced.

Seth J. Frantzman, executive director of the Middle East Center for Reporting and Analysis, said the new religious deal builds on economic cooperation between the two countries and their mutual interests — along with Russia — in Syria.

"It also comes in the wake of a meeting in Malaysia where both Iran and Turkey expressed interest in a new 'gold dinar' currency. There is a growing consensus that Turkey and Iran have much in common in the region and globally," Frantzman told Arab News.

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The new deal, he suggested, shows that the two countries are keen to cooperate in other spheres of interest.

"It illustrates that the concept of the Shia-Sunni divide is partly a myth," he said. "The Muslim Brotherhood — which underpins the AKP in Turkey — and Iran's Ayatollahs have things in common. The Iranian IRGC and the Brotherhood met in 2014 in Turkey to discuss joint strategy."

The agreement comes just a few months after Ankara and Tehran — guarantors of the Astana process in Syria alongside Russia — found themselves at odds over their regional policies.

Iran, a close ally of Syrian President Bashar Assad, opposed Turkey's military operation in northern Syria against Syrian Kurdish forces as well as its establishment of military posts inside Syria. In return, Turkey accused Iran of betraying the consensus between them.



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Turkey, Iran carried out joint operation against Kurdish militantsTurkey, Iran to stage joint raid against Kurd rebels