



Shaping the Future of Digitization , Talent & Work in the MENA region

Digital skills for Arabic speakers everywhere



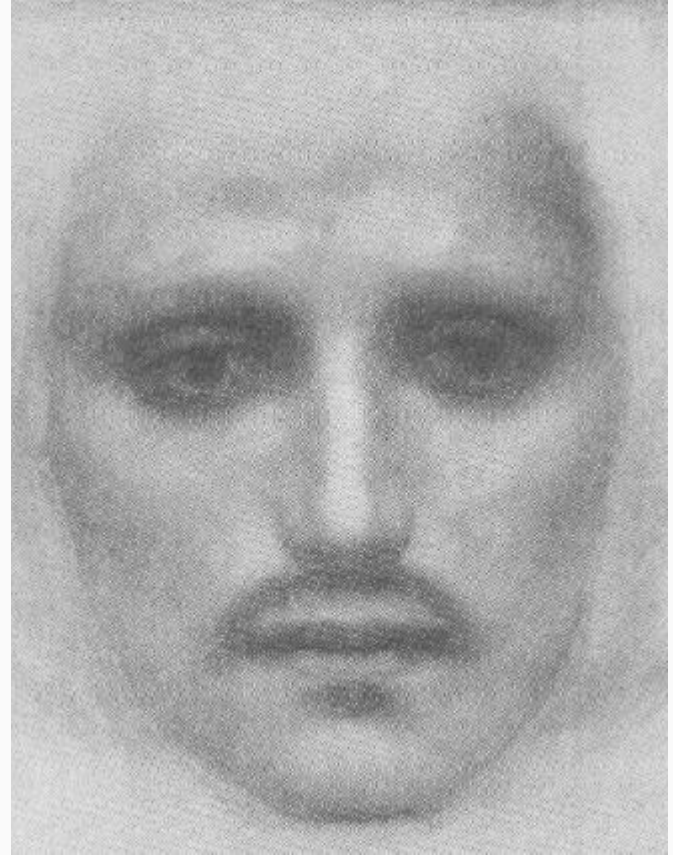
Selim J. Eddé

Head of Public Policy & Government Relations, MENA, Google

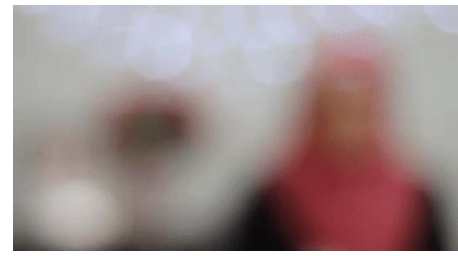
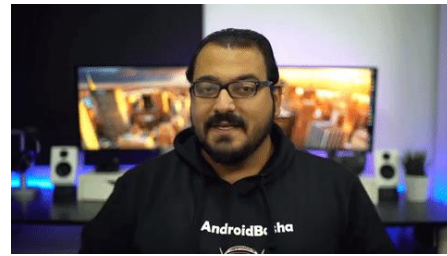
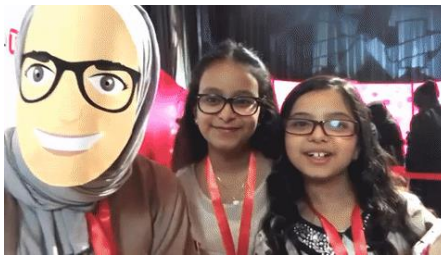
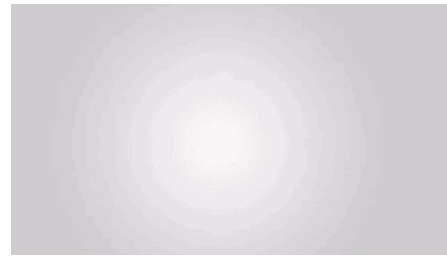
“You work that you may keep
pace with the earth and the soul
of the earth.

For to be idle is to become a
stranger unto the seasons,
and to step out of life's
procession, that marches in
majesty and proud submission
towards the infinite.”

Gibran Khalil Gibran







ARTIFICIAL INTELLIGENCE

*Deep blue beats world Chess
Champion Garry Kasparov.*



*A computer beats two world
Jeopardy! champions.*

| THE DANGEROUS | WILLIAM F. WYMER JR. | SEPTEMBER 11, 2001 SUSPECTED | NAME: TALK IT AND THINK IT | DELICIOUS | COMPLICATED BY COUNTRY |
|---------------|----------------------|---------------------------------|-------------------------------|-----------|---------------------------|
| \$200 | \$200 | \$200 | \$200 | \$200 | \$200 |
| \$400 | \$400 | \$400 | \$400 | \$400 | \$400 |
| \$600 | \$600 | \$600 | \$600 | \$600 | \$600 |
| \$800 | \$800 | \$800 | \$800 | \$800 | \$800 |
| \$1000 | \$1000 | \$1000 | \$1000 | \$1000 | \$1000 |

**MARCH 2016 ARTIFICIAL INTELLIGENCE
THE INFLECTION POINT**



MARCH 2016 ARTIFICIAL INTELLIGENCE & MACHINE LEARNING THE INFLECTION POINT

AI in DeepMind AlphaGo beat a top international Go Champion.



Artificial Intelligence “AI” & Machine Learning “ML”

“the science of making machines smart”

1- Solve intelligence

2- Use intelligence to solve everything else

General Purpose

VS

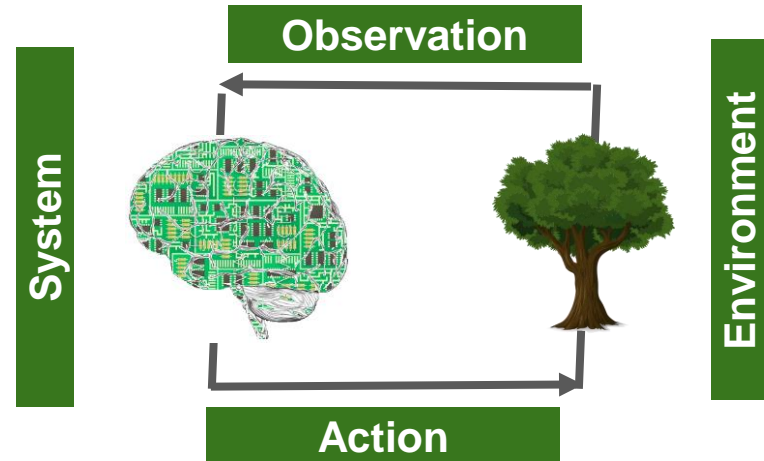
Narrow AI



General Purpose Learning Machine

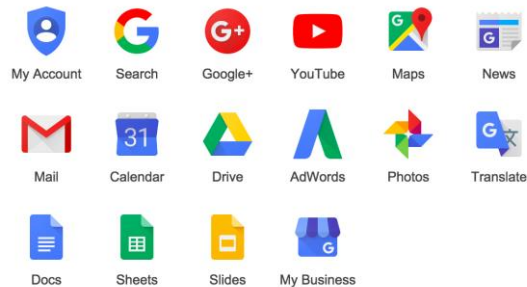
1- **Learn:** automatically from raw input-not pre-programmed.

2- **General:** same system operates across a wide set of tasks

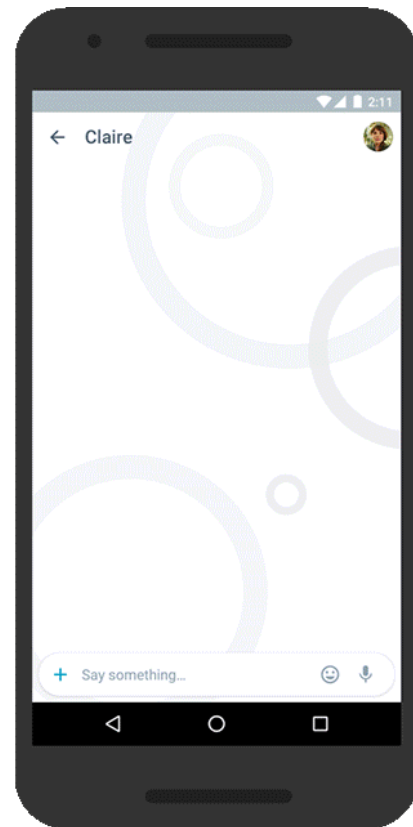




Hi, how can I help?



Machine learning is now a crucial component of almost every Google service





Aviation safety

Flight response

An artificially intelligent autopilot that learns by example



From the print edition | Science and technology >

Sep 15th 2016



ON JUNE 1st 2009, an Air France airliner travelling from Rio de Janeiro to Paris flew into a mid-Atlantic storm. Ice began forming in the sensors used by the aircraft to measure its airspeed, depriving the autopilot of that vital data. So, by design, the machine switched itself off and ceded control to the pilots. Without knowing their speed, and with no horizon visible in a storm in the dead of night, the crew struggled to cope. Against

Innovations



How artificial intelligence could lead to self-healing airplanes

By Dominic Basulto October 6, 2015



The Boeing 787 Dreamliner could be getting an AI upgrade. (Courtesy Boeing/Carnegie Mellon)

A new partnership between aviation giant Boeing and Carnegie Mellon University hints at the power of fields such as artificial intelligence and big data to transform huge, multi-billion-dollar industries. As part of a three-year, \$7.5 million deal that will establish a new Aerospace Data Analytics Lab, Boeing and the Carnegie

- 1 If you've been ignoring the live stream of April the pronghorn, now's the time to tune in 
- 2 Here's what we know so far about Team Trump's ties to Russian interests 



TensorFlow



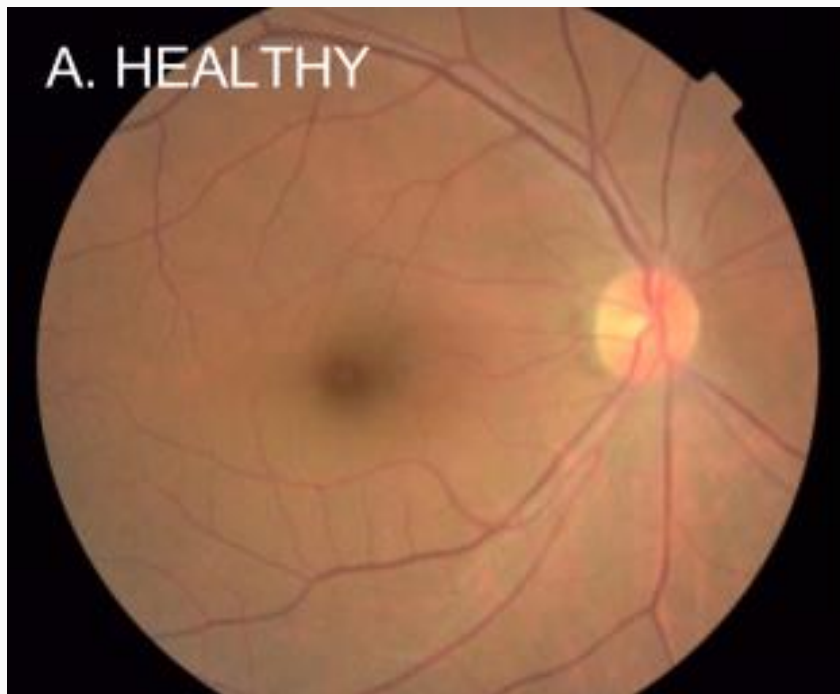
DIABETES

5 OF THE TOP 15 COUNTRIES WITH THE HIGHEST PREVALENCE
OF DIABETES ARE IN THE MIDDLE EAST AND NORTH AFRICA



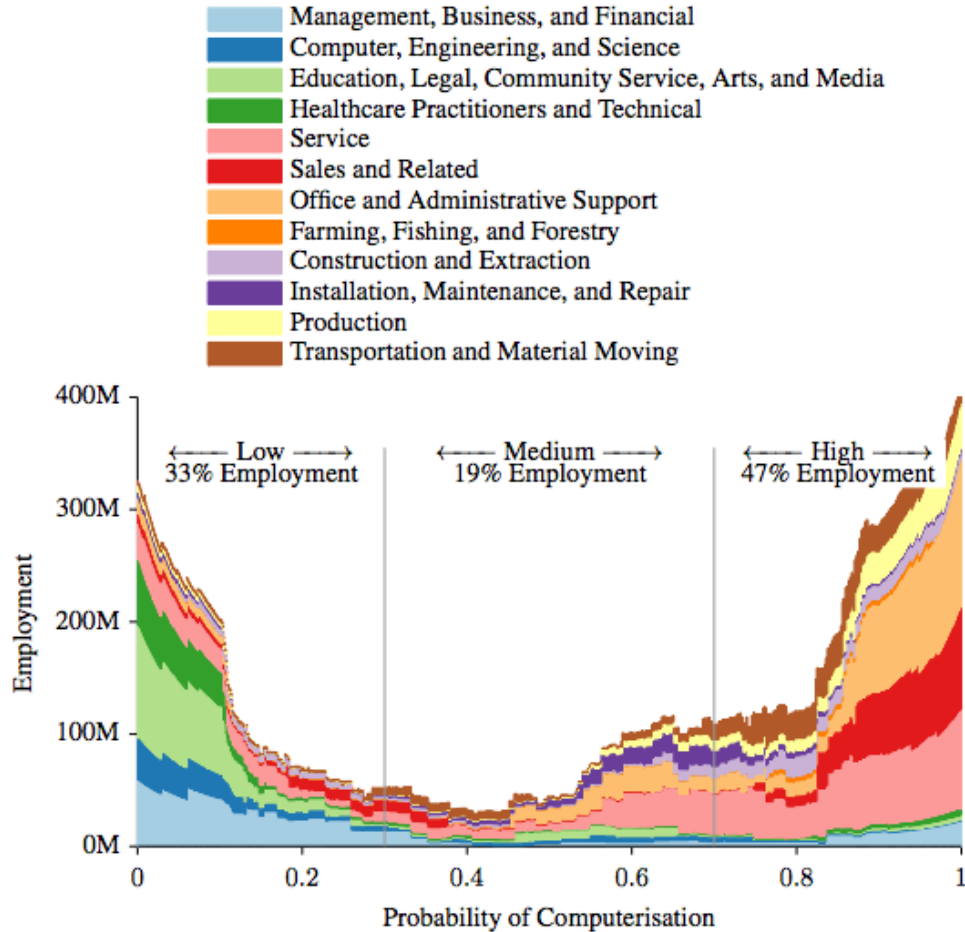
Source : Zurich Life

A. HEALTHY



B. DISEASED





Frey & Osborne “The Future of Employment” In the 21st Century

**47 % of tasks will be
“computerized”**

Interest over time

Google Trends

● social media manager



Worldwide. 2004 - present.

Interest over time

Google Trends

● App Developer



Worldwide. 2004 - present.

Interest over time

Google Trends

● Zumba



Worldwide. 2004 - present.

Interest over time

Google Trends

● Wind turbine technician



Worldwide. 2004 - present.

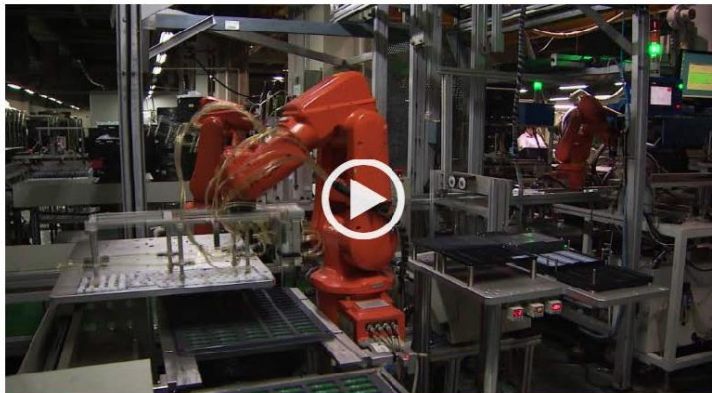


Internet of Things

Smart robots could soon steal your job

by Ivana Kottasova @ivanakottasova

January 15, 2016: 1:33 PM ET



Robots are taking over China's factory floors

Think you are too smart to be replaced by a robot in your job?
Think again.

Social Surge - What's Trending



JCPenney, Kohl's, Macy's and Sears sued over misleading prices



Your data is not safe. Here's how to lock it down



Ikea renames products after your secret anxieties

Mortgage & Savings

Powered by LendingTree

Mortgage Personal Loans Credit Cards

| Loan Type | Rate | APR |
|-------------|-------|-------|
| 30-yr fixed | 3.63% | 3.63% |
| 15-yr fixed | 2.00% | 2.00% |
| 5/1 ARM | 2.63% | 3.44% |

DETROIT — Technological innovation is widely billed as a miracle cure for the United States' economic doldrums. Its aftereffects, however, may be far from benign. The introduction of revolutionary new technologies such as robots — versatile computer-controlled mechanical arms — raise two painful possibilities: sizeable losses of jobs and a deteriorated quality of working life.

The threat of lost jobs, although also dependent on social and economic factors, is especially critical. Auto makers are already buying robots in record numbers, despite a downturn that has resulted in 250,000 indefinite layoffs. Even the faltering Chrysler Corporation has added 128 of these new "recruits" to its work force for the 1981-model year.

But the robot is only one part of a larger computerization that is affecting virtually every productive activity in society from the office to the machine shop. In fact, many white-collar occupations that promised jobs to displaced blue-collar workers in the past are themselves being automated.

In the case of robots, relatively conservative estimates predict that sales in this country will grow at a compound rate of 25 percent a year for the next decade, culminating in annual sales of \$800 million and production of 17,000 robots a year by 1990. While this hardly seems threatening to a manufacturing work force of 20 million people, robots are only one of the labor-displacing technologies being introduced. Moreover, the employment effects are cumulative and have a dis-

A Robot Is After Your Job

By Harley Shaiken

proportionate impact on a few key industries. Robots that begin work tomorrow will still be on the job in 1990, giving us a robot population of about 80,000. If 40 percent wind up in the auto industry (compared to 55 percent worldwide today), 32,000 robots could displace more than 100,000 auto workers. In fact, the potential loss of jobs is more serious than these figures indicate. New breakthroughs in robot technology such as "sight" and "feel" mean that each robot could displace far more workers in a decade. In addition, some industry observers feel that companies that sell computers may enter the market, resulting in a robot-population explosion in the hundreds of thousands, not tens of thousands.

The quality of working life will also change. While the first generation of robots primarily did such hazardous and hot jobs as welding and foundry work, robots are now being created for jobs where workers have the most control over the pace of work: machine loading and light assembly, among the more desirable production tasks.

It is not too invasive to assume that enough jobs will automatically be created for the number of people displaced. Economic revitalization no longer means re-employment. And the devastating social cost of unemployment is not reckoned in the savings that technology promises.

Such a socially destructive use of technology need not be inevitable. Jobs for workers displaced and improved working conditions for those who remain ought to be a condition for the introduction of robots. Productivity gains, for example, could translate into a shorter work week at the same pay rather than into fewer jobs. Technology could be designed to enhance human skill and experience rather than make people "interchangeable" with machines. Realistically, these alternatives require worker-union participation in the design and deployment of technology.

The goal, after all, should be a technology that benefits people — not one that destroys them.

Harley Shaiken, a research fellow at the Massachusetts Institute of Technology, is completing a book on automation.

Robots' Rise

**They Bid for Big Jobs
Both in Outer Space
And in U.S. Factories**

**A.M.F. Designs Robot to Send
To Moon; G.E. Works on
One to Paint New Autos**

Beetle's Hazardous Mission

BY THOMAS O'TOOLE

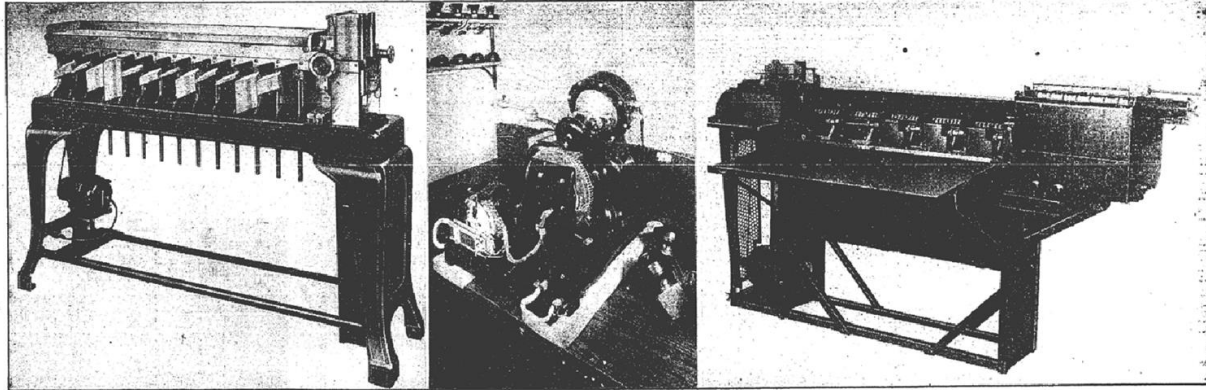
Staff Reporter of THE WALL STREET JOURNAL

GREENWICH, Conn.—America's first astronaut to reach another planet may have long spidery arms and a bell-shaped head with a window in it.

Such an inhuman-appearing space traveler is not as far-fetched as it seems. Even now the creature—a robot—is taking shape here at the Greenwich Engineering division laboratories of American Machine & Foundry Co. A.M.F. engineers believe their robot, remotely controlled from earth, would be far more useful than a human in exploring outer space—at least until rockets can be made powerful enough to be readily capable of returning home from trips to the Moon, Mars, Venus or even more distant targets.

Elsewhere around the country in laboratories and on drawing boards, increasing attention is being paid to robots, once regarded as science-fiction characters with little or no practical value. Indeed, most of the robots in use and development today bear little resemblance to the mechanical bipeds popularized by movie makers and cartoonists. But these machines, nevertheless, are true robots—automatic devices that perform human functions, or operate with seemingly human intelligence.

Robot Brains Outdo Man's Mind in Speed and Accuracy of Results



'Thinking Machines' Replace the Thinker

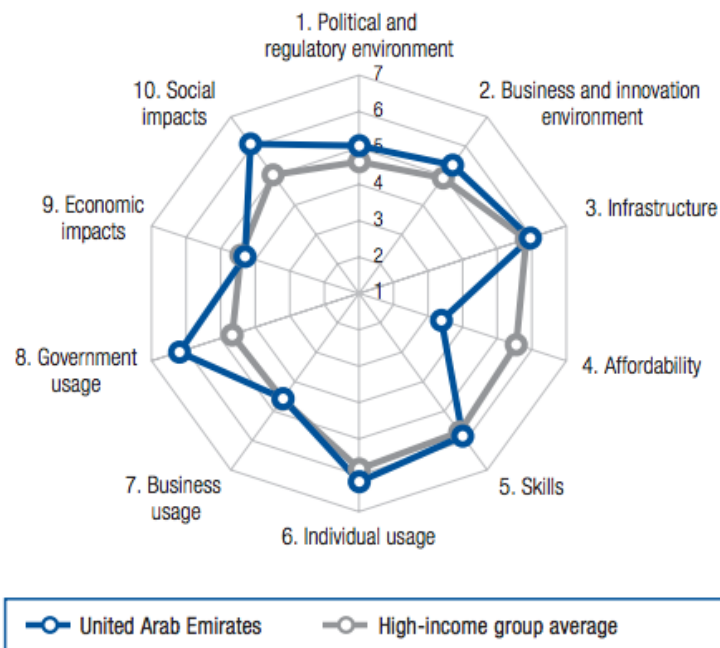
**They Predict Tides, Pick Criminals' Fingerprints,
Calculate Mathematical Problems,
and Perform Amazing Tasks.**

Optometrist journey



United Arab Emirates

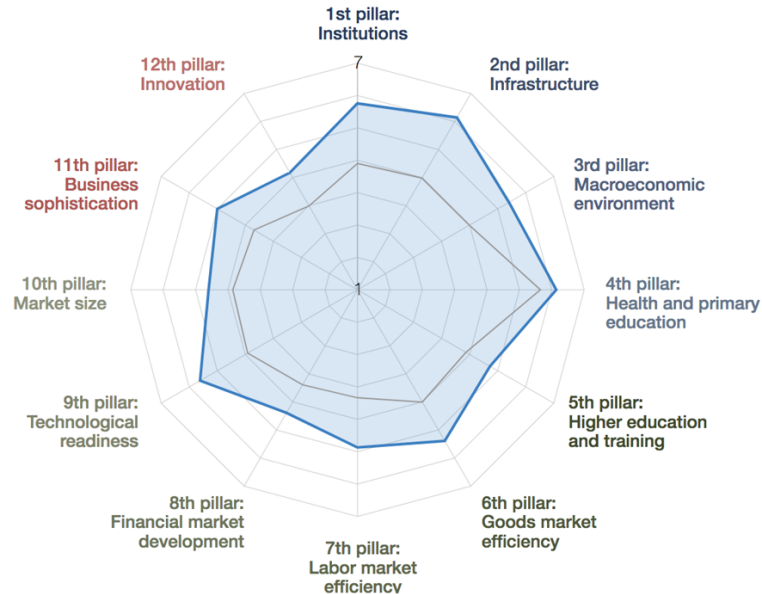
| | Rank (out of 139) | Value (1–7) |
|---|----------------------|----------------|
| Networked Readiness Index..... | 26.. | 5.3 |
| Networked Readiness Index 2015 (out of 143)..... | 23..... | 5.3 |
| Networked Readiness Index 2014 (out of 148)..... | 24..... | 5.2 |
| Networked Readiness Index 2013 (out of 144)..... | 25..... | 5.1 |
| A. Environment subindex..... | 19..... | 5.2 |
| 1st pillar: Political and regulatory environment..... | 25..... | 5.1 |
| 2nd pillar: Business and innovation environment..... | 13..... | 5.4 |
| B. Readiness subindex | 56..... | 5.0 |
| 3rd pillar: Infrastructure | 28..... | 5.9 |
| 4th pillar: Affordability..... | 116..... | 3.4 |
| 5th pillar: Skills..... | 22..... | 5.8 |
| C. Usage subindex | 13..... | 5.6 |
| 6th pillar: Individual usage..... | 19..... | 6.2 |
| 7th pillar: Business usage | 27..... | 4.6 |
| 8th pillar: Government usage | 2..... | 6.2 |
| D. Impact subindex | 18..... | 5.2 |
| 9th pillar: Economic impacts..... | 26..... | 4.3 |
| 10th pillar: Social impacts..... | 2..... | 6.1 |



Key indicators, 2016

Source: International Monetary Fund; World Economic Outlook Database (April 2017)

| | | | |
|---------------------|-------------------------|-----------------------|----------------------------|
| Population millions | 9.9 i | GDP per capita US\$ | 37,677.9 i |
| GDP US\$ billions | 371.4 i | GDP (PPP) % world GDP | 0.56 i |



Egypt

Rank Value
(out of 139) (1–7)

Networked Readiness Index.....96..3.7

Networked Readiness Index 2015 (out of 143)..... 94..... 3.6

Networked Readiness Index 2014 (out of 148)..... 91..... 3.7

Networked Readiness Index 2013 (out of 144)..... 80..... 3.8

A. Environment subindex..... 113..... 3.5

1st pillar: Political and regulatory environment..... 102..... 3.3

2nd pillar: Business and innovation environment..... 113..... 3.7

B. Readiness subindex 97..... 4.2

3rd pillar: Infrastructure 94..... 3.1

4th pillar: Affordability 47..... 5.8

5th pillar: Skills 111..... 3.7

C. Usage subindex..... 89..... 3.5

6th pillar: Individual usage..... 80..... 3.8

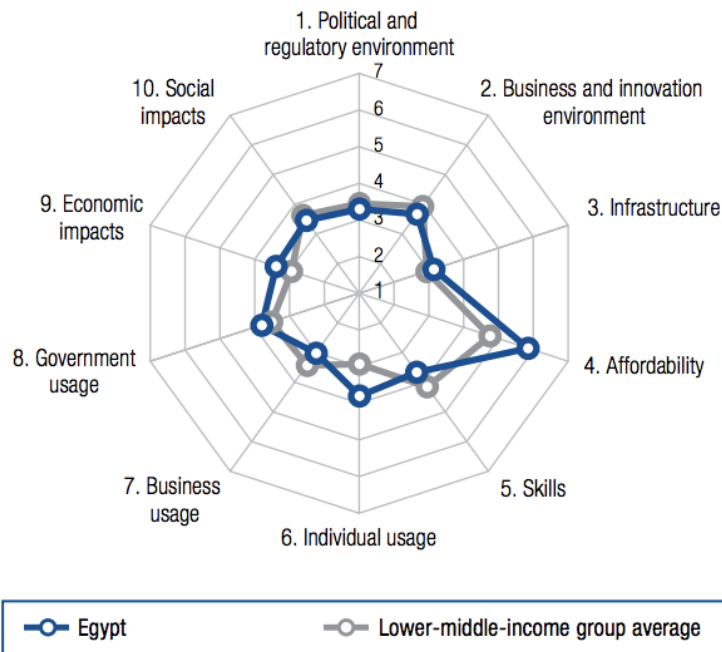
7th pillar: Business usage 129..... 3.0

8th pillar: Government usage..... 67..... 3.8

D. Impact subindex 85..... 3.4



9th pillar: Economic impacts..... 58..... 3.4

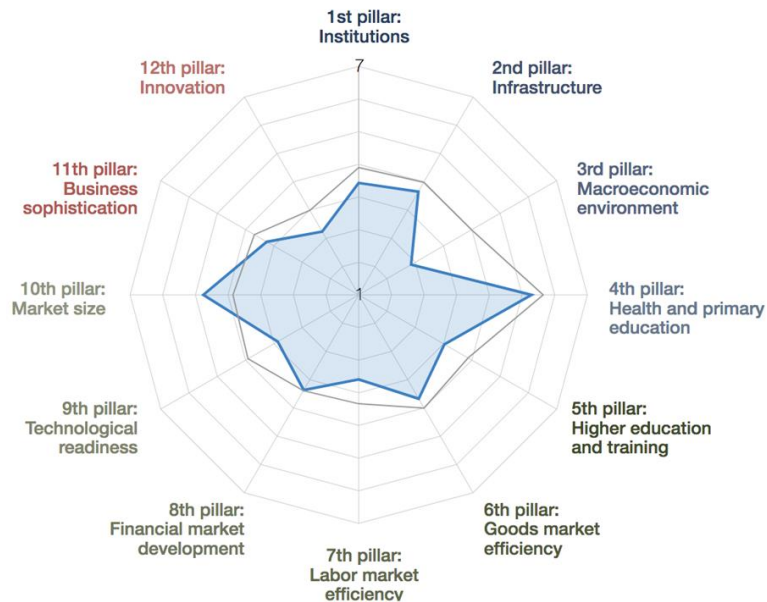
10th pillar: Social impacts..... 103..... 3.5



Key indicators, 2016

Source: International Monetary Fund; World Economic Outlook Database (April 2017)

| | | | |
|---------------------|---|-----------------------|---------|
| Population millions | 90.2  | GDP per capita US\$ | 3,684.6 |
| GDP US\$ billions | 332.3  | GDP (PPP) % world GDP | 0.95 |



MENA Talent Competitiveness Index 2017

MENA rankings

**Global GTCI ranking in parentheses*

1. UAE (overall: 19)
2. Qatar (overall: 21)
3. Saudi Arabia (overall: 42)
4. Bahrain (overall: 47)
5. Kuwait (overall: 57)
6. Jordan (overall: 58)
7. Oman (overall: 59)
8. Lebanon (overall: 62)
9. Tunisia (overall: 77)
10. Egypt (overall: 88)
11. Morocco (overall: 96)
12. Algeria (overall: 107)



- UAE and Qatar belong to the top 25% of GTCI
- UAE and Qatar excel at Attract
- Countries across MENA have a similar performance in Grow – but they differ substantially in Attract and Enable

The Talent Competitiveness Index measures countries abilities to:
Enable, Retain, Grow, and Retain talent

Source: INSEAD

How ready is MENA for the future of work?

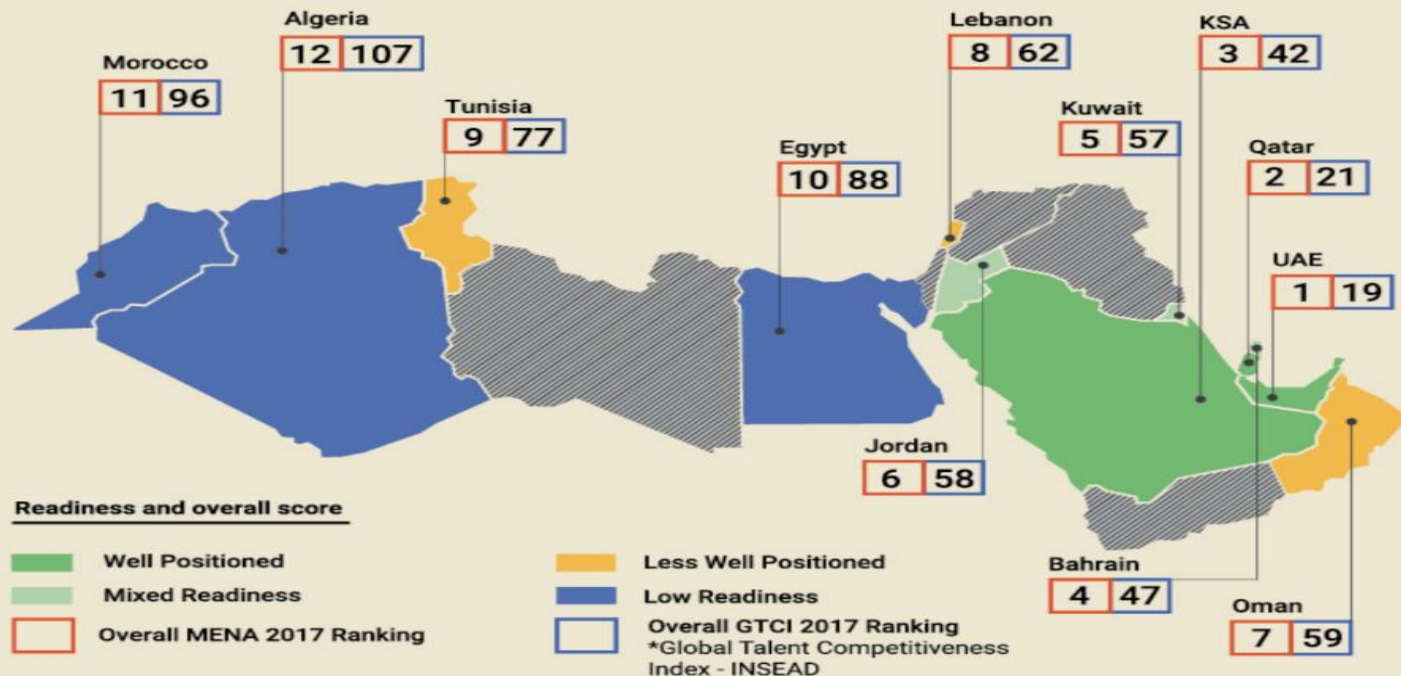
Readiness is measured by the following factors

1.Educational system

2.Employment & protection policies

3.Stakeholder connectedness

4.Tech competency



Across Middle East people use internet to find businesses...

76%

of people who need
information look to the
internet first

74%

of internet users in look
for basic local
information daily

73%

of internet users lose
trust when business
listing is not accurate

...but they do not find them

Business listings density on Google Maps: MENA 15x lower than EU average





Maharat min Google

Digital skills for Arabic speakers everywhere



The Arab world
is one of the
most youthful
regions globally

#مهارات_تك

مهارات من Google

مهارات من Google



Unemployment
is the biggest
concern
amongst youth

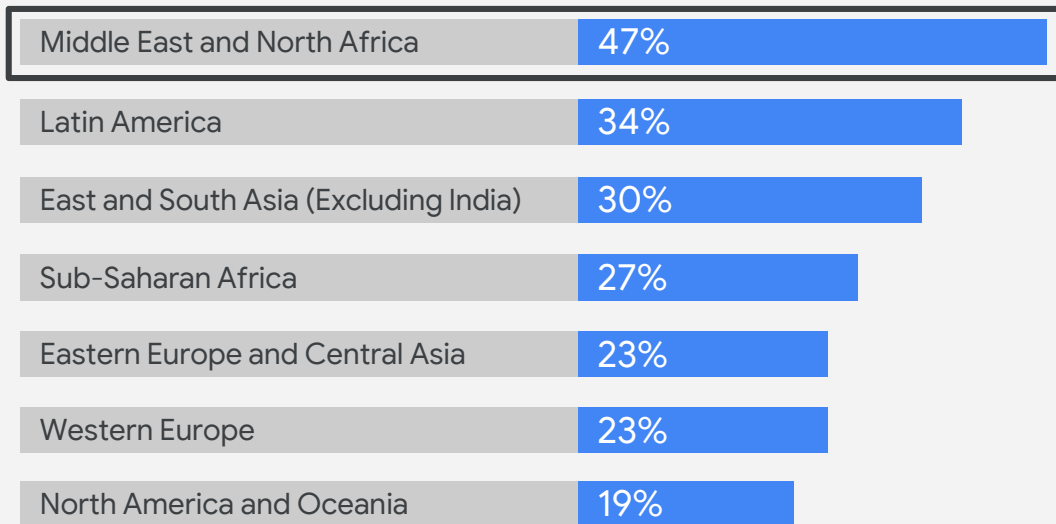
50% of university graduates are females, yet only 25% of women participate in the workforce

Sources: International Monetary Fund & UNESCO Institute for Statistics



مهاراتك من Google

Incremental 2025 global GDP over business-as-usual scenario



Gender parity
can bring 47%
incremental
GDP growth

مهارات من Google

g.co/Maharat

مهارات من Google

المزيد ▾

مواد إضافية

مكتبة المواضيع

لوحة التحكم



العالم الرقمي في متناول يديك

يؤمّر برنامج "مهارات من Google" دورات تدريبية مرنة ومخصصة لتزويدك بالمهارات الرقمية اللازمة لمساعدتك على تنمية مسارك الوظيفي أو نشاطك التجاري بالوتيرة التي تناسبك.

- تحسين مهاراتك في المجال الرقمي
- التعرّف على أدوات تساعد في نمو نشاطك التجاري
- التحضير للدخول في المسار المهني الذي تريده

ابدأ التعلم

Free, entry-level,
platform-inclusive
and entirely in Arabic



26 Core topics
&
over 100 lessons



Topics include
search engine
marketing, social
media, e-Commerce
and more!

فرصتك على الانترنت

عالم التسويق عبر محرك البحث مليء بالفرص، ولكن للاستفادة من تلك الفرص عليك معرفة استخدام أدوات البحث واختيار الكلمات الرئيسية، وبعد ذلك يمكنك تحسين حملات نتائج البحث حتى تحصل على أكبر عائد لما تدفعه.

شاهدت 2 من أصل 2 دروس

الخطوات الأولى نحو النجاح على الانترنت

يمكن الترويج لنشاط تجاري بطرق مختلفة على الإنترنت، ولكن قبل أن تبدأ، يجب التعرف على كيفية عمل هذه القنوات الرقمية، وأفضل الخيارات لك، وكيف تبني استراتيجية واضحة تساعدك في تحقيق أهدافك وتحليل نتائجك.

شاهدت 4 من أصل 4 دروس

تعزیز تواجدك على الإنترنت

تتوفر طرق عديدة ليتم العثور عليك على الإنترنت مثل المواقع الإلكترونية والقوائم المحلية وتطبيقات أجهزة الجوال ووسائل التواصل الاجتماعي، وإذا كان الموقع هو الأنسب لأهدافك عليك الإلمام بأساسيات عمله، والأهم هو امتلاك موقع مصمم وقابل للاستخدام ليستطيع توصيل ما تريده والسماح للعملاء بالعثور على ما يبحثون عنه

شاهدت 6 من أصل 6 دروس

إنشاء متجرك على الإنترنت

ادخل عالم التجارة الإلكترونية وتعلّم كيف تبّيع منتجاتك على الإنترنت بكفاءة. سيغطي هذا الموضوع أدوات ذات صلة مثل طرق الدفع والإدارة التي ستحتاج إليها من أجل إطلاق متجر على الإنترنت.

شاهدت 2 من أصل 2 دروس

زيادة المبيعات على الانترنت

بعد إنشاء متجرك على الإنترنت، يحين وقت التأكد من أن كل العمليات تسير بشكل صحيح لضمان حصول العميل على تجربة سلسة، لذلك فإن كل نقطة تواصل بين العميل وصاحب النشاط التجاري مهمة انطلاقاً من تسجيل الدخول والتصفح مروراً بتسجيل الخروج ووصولاً إلى تلقي عروض خاصة بالمبيعات.

شاهدت 3 من أصل 3 دروس

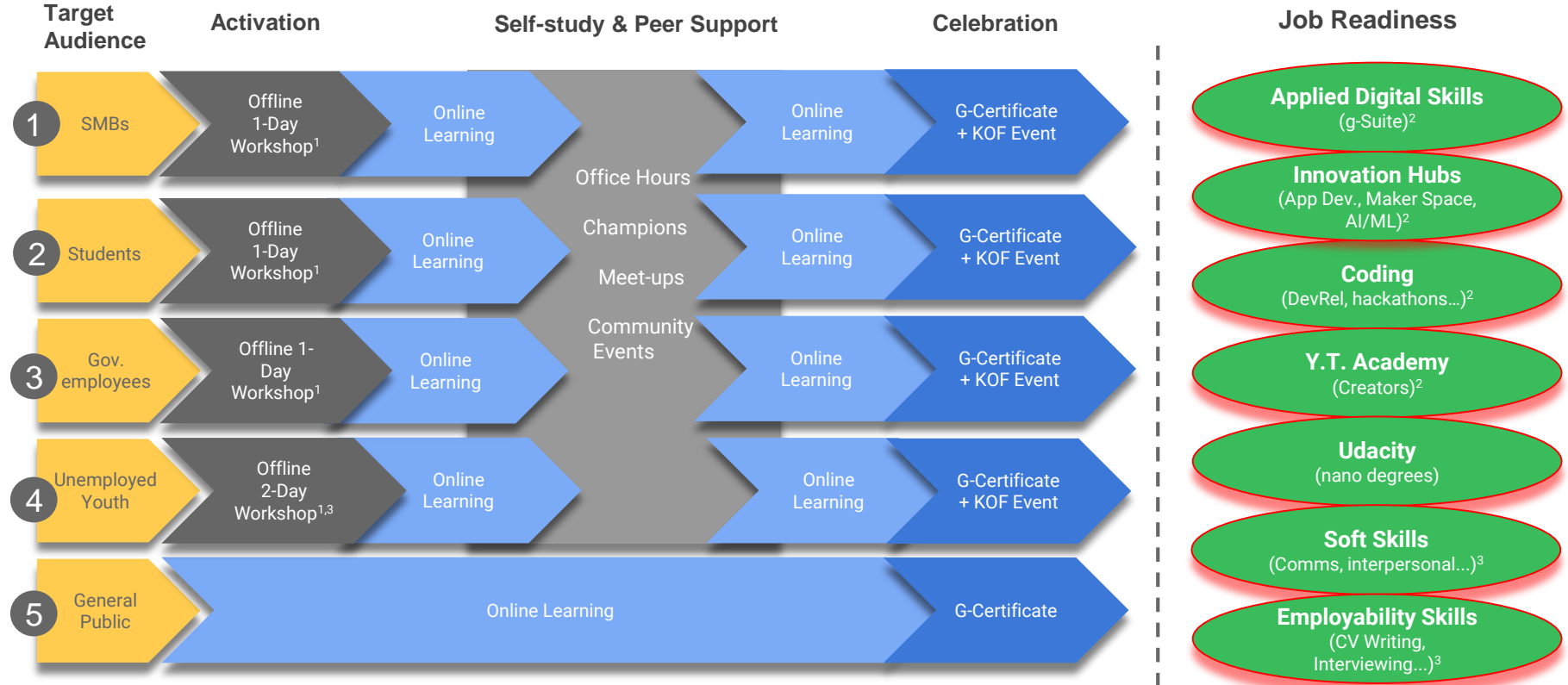
التخطيط لاستراتيجية نشاطك التجاري على الإنترنت

تعلّم هذه المادة كيف تُبرز أفضل ما لديك عند وضع استراتيجية رقمية للنشاط التجاري، بدءاً بتحديد أهدافك وصولاً إلى معرفة كيفية تتّبع تقدّمك، ستعلّم كيف تتميّز عن المنافسين وتُبهر العملاء في كل لحظة من تجربتهم معك.

شاهدت 5 من أصل 5 دروس

المشاهدة محددًا

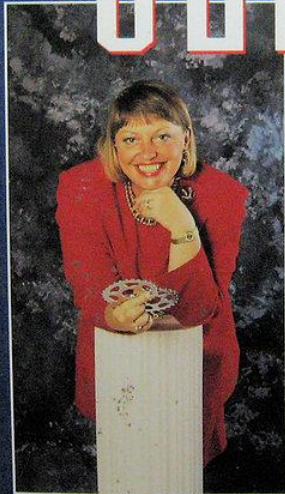
Maharat Program Structure



Digitizing
/in progress/



SHIFTING GEARS



THRIVING
IN THE
NEW
ECONOMY

Nuala Beck



THE MENA WINDOW OF OPPORTUNITY - “GROWING YOUNGER”



THE ROLE OF GOVERNMENT

1-POLICIES



2-PLATFORM



3-MINDSET



Shaping the Future of Work Technology's Role in Employment

A report by: The Economist Corporate Network

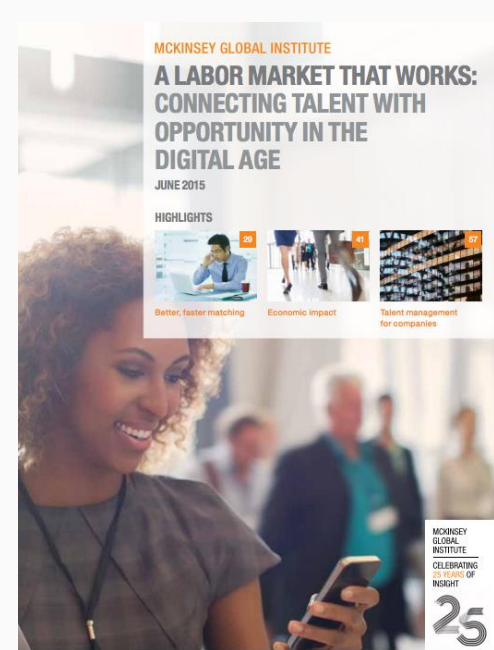


Re-dynamizing the Job Machine



Technology-driven transformation of labor markets in MENA

RESEARCH McKinsey -EIU-INSEAD



Online talent platforms are increasingly connecting people to the right work opportunities. By 2025 they could add \$2.7 trillion to global GDP, and begin to ameliorate many of the persistent problems in the world's labor markets.

**"IF YOU
TORTURE THE
DATA LONG
ENOUGH, IT WILL
CONFESS."
-RONALD COASE**



**“Markets
become
efficient
when the
cost of a
transaction
nears zero”**

“**Google's mission** is to organize the world's information and make it universally accessible and useful.”

The Internet is for everyone
~~that it can afford it.~~

"A healthy Disregard for the impossible"



Policy Recommendations

1. Educate for Employment

Enable blended learning: online, instructor led, and on-the-job with link to business or private sector

2. Affordable and accessible Internet

Provide high-quality internet access to all

3. Digital First

Digitized government would prompt citizens to improve their net literacy

4. Labor market reforms

Enable mobility, life long learning, & make employment in the public sector less attractive

5. Enable SMEs

Facilitate access to markets, coaching, finance, cloud based productivity tools & talent

6. Encourage a culture of risk

Curb fear of failure through well-regulated transparent national or regional stock exchange(s)

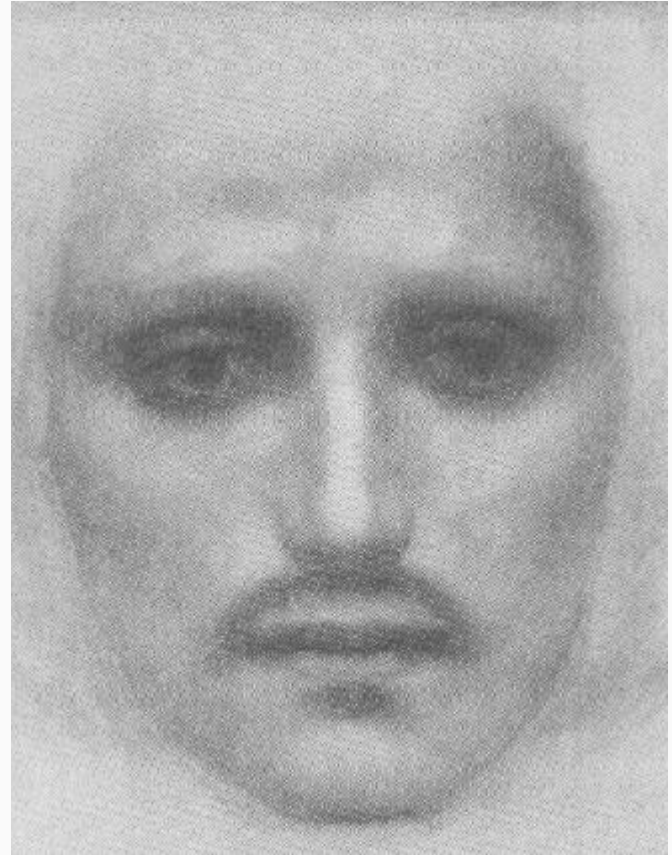


THE CHANGING NATURE OF WORK: PREPARE FOR JOBS THAT DO NOT EXIST

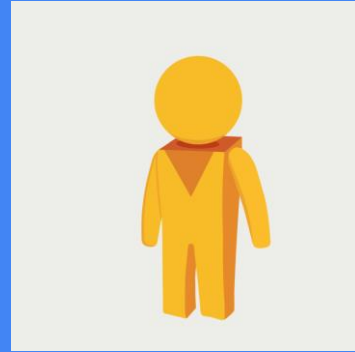


“Work is love made visible. And if you can't work with love, but only with distaste, it is better that you should leave your work and sit at the gate of the temple and take alms of the people who work with joy”

Gibran Khalil Gibran



Thank you!



Google