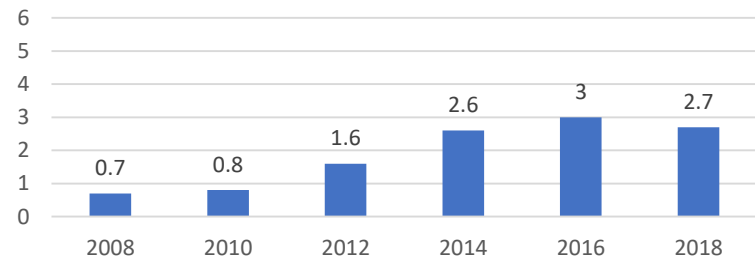
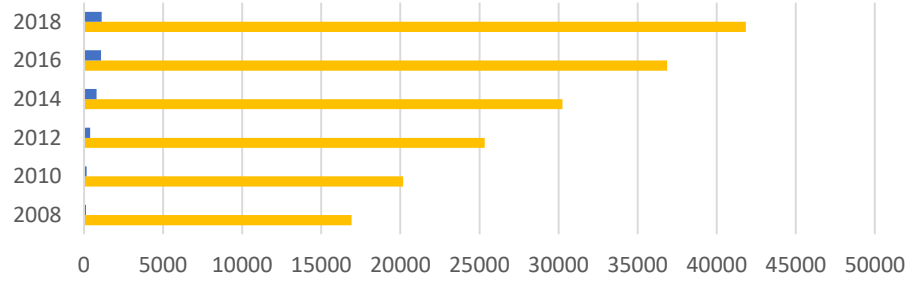
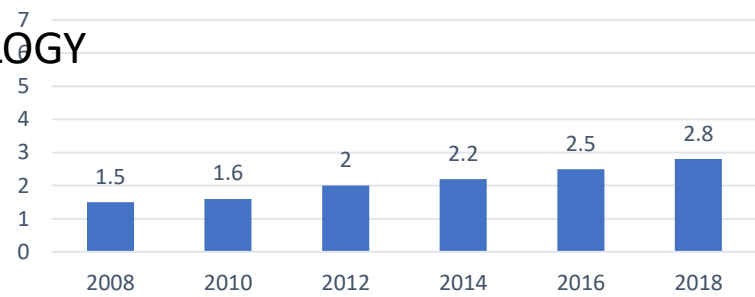
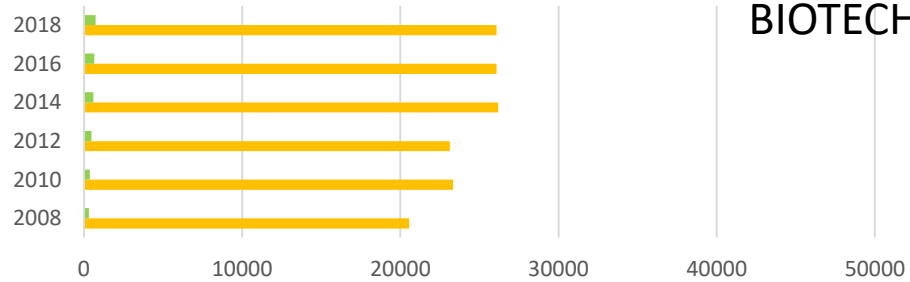


Facts in Arab countries	2008	2018	RATIO
Number of internet users	63 Mill	187 Mill	3.0
Number of Mobile Phones	214 Millions	413 Millions	1.9
Amount of Energy Solar	27 GWh	1032 GWh	38.2
Cost Drop of Solar energy		80% less	80.0
Number of Scientific Publications	21000	82000	3.9
Number of Researchers	131000	195000	1.5
Percent of Digital Arabic Content	1% #13 Language	5% Rank #4 Language	5.0
Amount spent on R&D	6 Billions \$	16 Billions \$	2.7
Number of University Students	5 Millions	14 Millions	2.8
Number of Universities	300	750	2.5
Population	340 Millions	415 millions	1.2

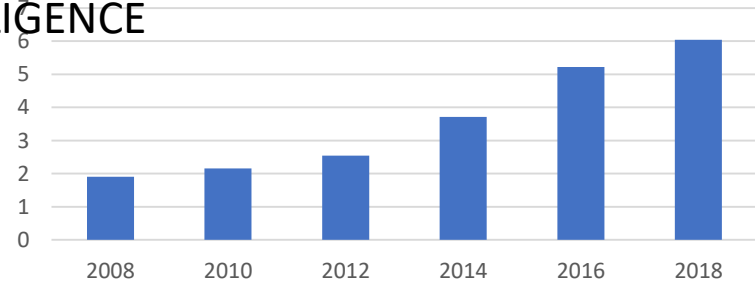
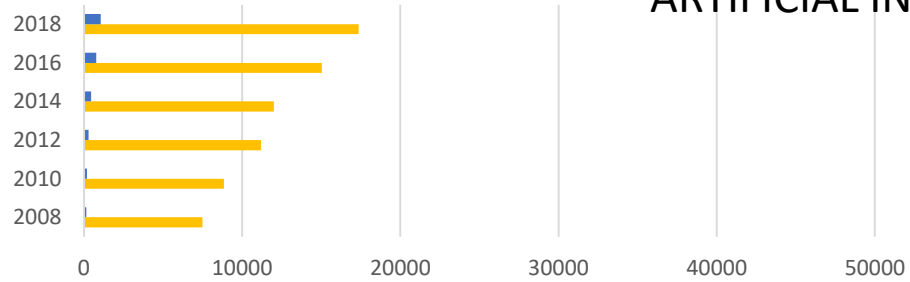
nanoscience & nanotechnology



BIOTECHNOLOGY



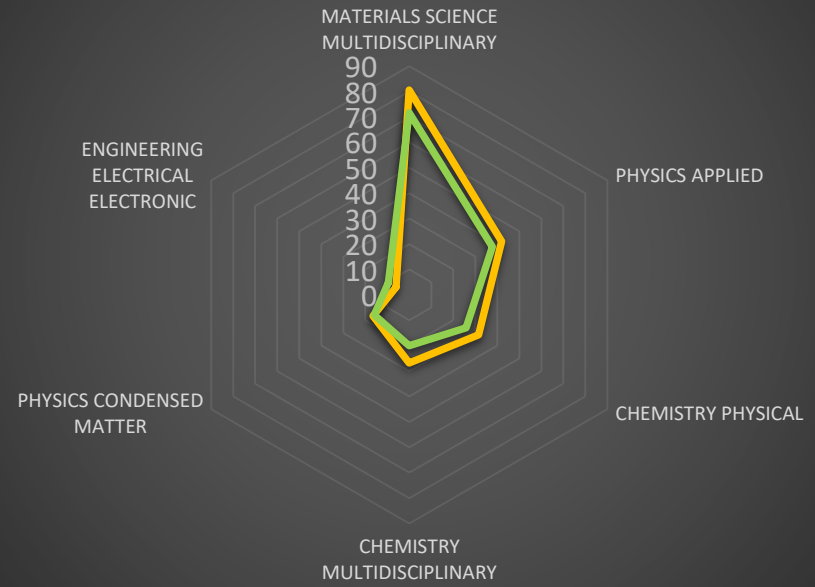
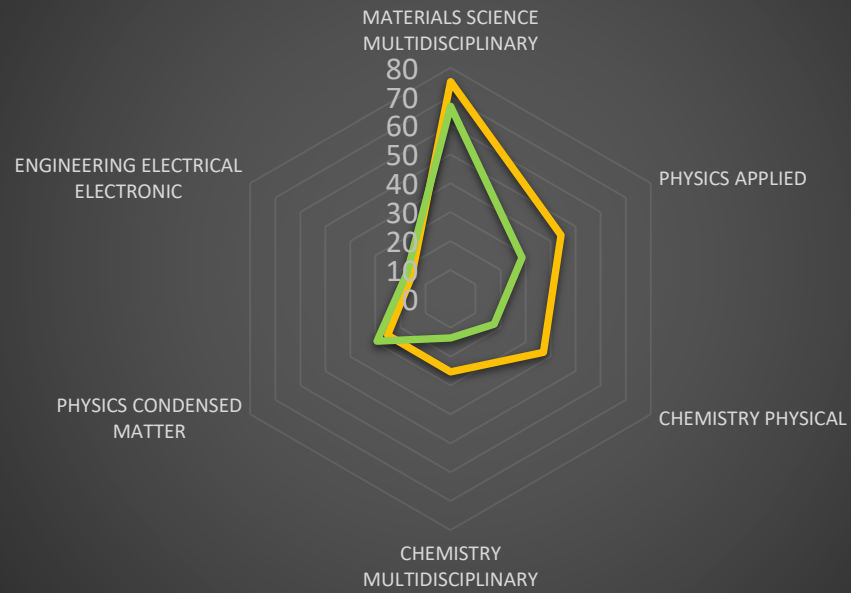
ARTIFICIAL INTELLIGENCE



nanoscience & nanotechnology

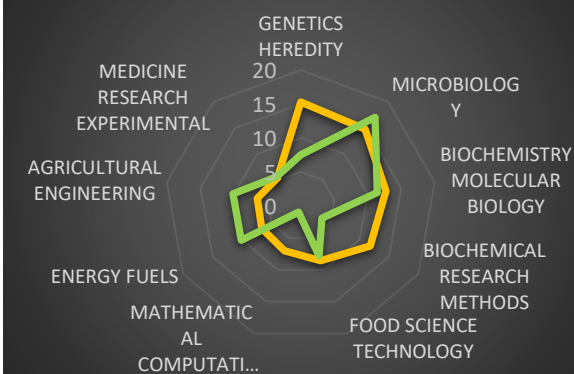
2008

2018

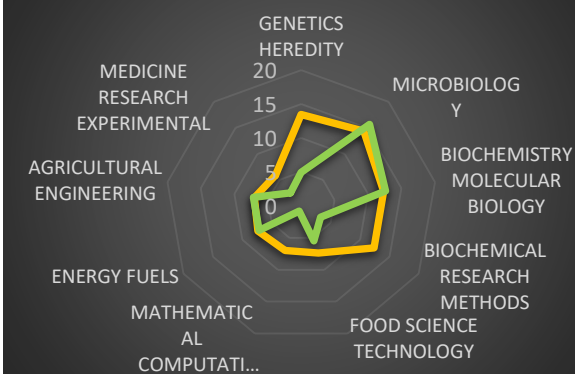


BIOTECHNOLOGY

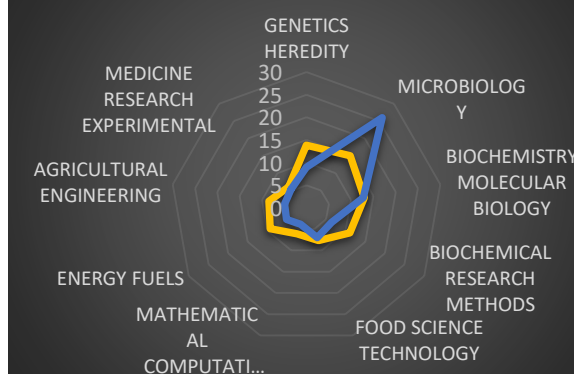
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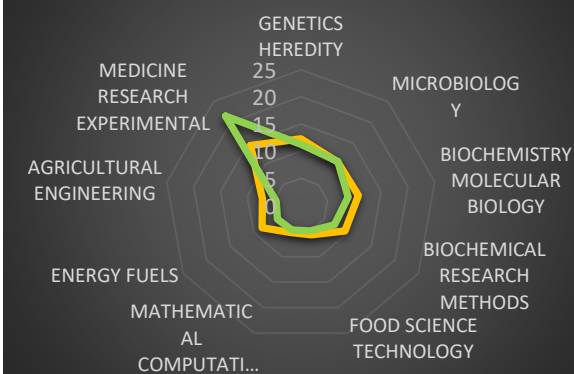
2010



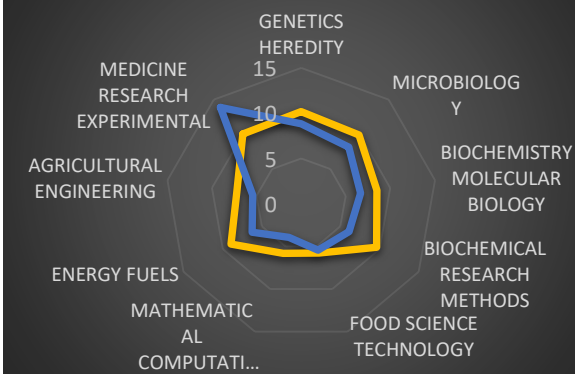
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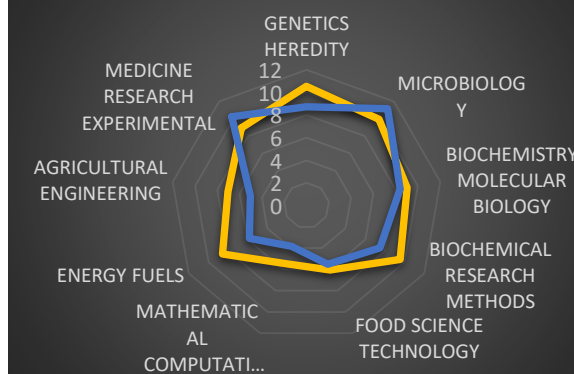
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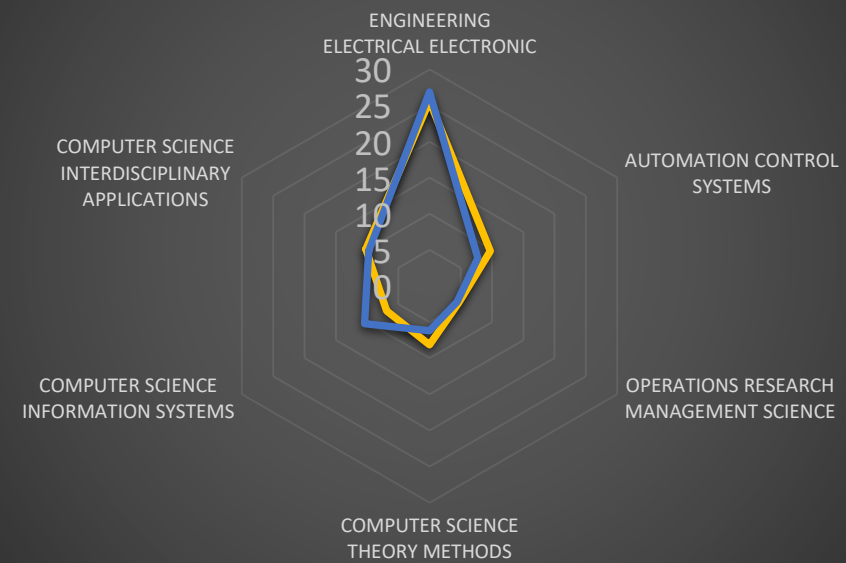
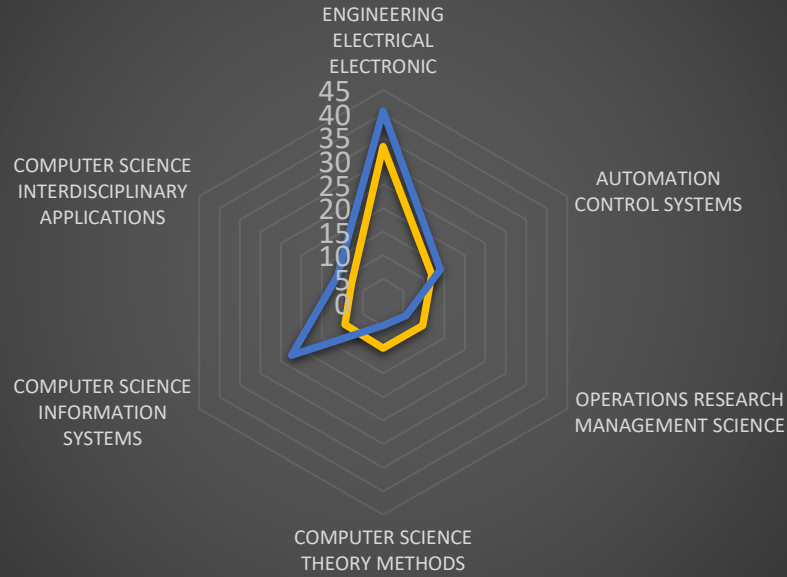
2018



ARTIFICIAL INTELLIGENCE

2008

2018



WIPO Technology TrENds – AI 2019

- 340,000 AI related Patents
- Over 50% published since 2013
- Deep Machine learning 175% Yearly Growth since 2013
- ANN grew 46% same period
- CV most popular mentioned 49% of all AI related patents
- More 70% is AI application in combination with another field
- Companies represent 26 of top 30 AI related patents filer
- 1.6 Million scientific publications
- Chinese org make up 17 of top 20 academic players AI patenting
- Chinese org are 10 of top 20 AI related scientific publications

Evaluated 4IR technologies in Arab Countries

4IR Technology	ACTIVITIES	ECOSYSTEM	POLICIES	R&D
Artificial Intelligence	SIGNIFICANT	SIGNIFICANT	MODERATE	SIGNIFICANT
Aug/Virtual Reality	MODERATE	SIGNIFICANT	MODERATE	MODERATE
Robotics & Automation	MODERATE	LIMITED	LIMITED	MODERATE
Internet of Things	SIGNIFICANT	LIMITED	MODERATE	SIGNIFICANT
Autonomous Vehicles	LIMITED	LIMITED	LIMITED	LIMITED
Nanotechnology	MODERATE	LIMITED	MODERATE	SIGNIFICANT
Biotechnology	MODERATE	LIMITED	LIMITED	SIGNIFICANT
3D Printing	MODERATE	LIMITED	MODERATE	LIMITED
Blockchain	MODERATE	SIGNIFICANT	LIMITED	LIMITED
Big Data	LIMITED	SIGNIFICANT	LIMITED	MODERATE

Expert group meeting entitled “Artificial Intelligence and Local Industrial Development”
ESCWA and AIDMO, Beirut 1-2 July, 2019

The meeting concluded with key recommendations as follows:

1. The organizers will develop and promote **AI guides for regulations and strategies** that maximize the benefits of AI and alleviate potential threats on societies and industries
2. The participants stressed the importance of **re-engineering the education system**
3. The meeting participants advocate the cooperation and partnership between the **public and private** sectors in joint national projects
4. The participants expressed a loud call to **deploy AI tools** for addressing the **challenges introduced by AI applications** mainly in privacy, cyber security and corporate security.