INDUSTRY UPDATE: Information Technology

Information Technology - US and EU/UK

The critical importance of Information Technology (IT) in business is obvious in the meantime, so it is no wonder that IT has achieved its own C-level status in the form of CTOs and CIOs, etc. in the last few decades. Therefore we have added these titles to how we define "executives" for the purpose of this Update (See Editor's Note for further details). Nevertheless, as an area of executive employment, this segment shows a surprising consistency and positive growth across the geographies we will cover in this update.

Per our definition, this industry employed about 109,562 IT executives in the US, an increase of 2% on prior year, and showed a modest churn of just 4,581 executives changing jobs in the same period. For the EU & UK cohort, the total was very similar—103,727, the increase was 3% and the churn only slightly higher at 5,822.   This relative stability, however, masks significant change at the company level.

In the US among the top employers (Chart 1) IBM stands head and shoulders above the competition in terms of the total number of executives employed in the sector, and, while the attrition at the segment leader stood at 6%, overall, the number of executives remained quite stable. This is less true for the rest of the pack that showed growth rates as high as 8% or even 11%, and attrition rates mainly in the single digit range, with a few notable exceptions in Accenture (-11%) and Genpact (-15%). Needless to say, a high growth rate and a high attrition rate (for example at Accenture) suggest a huge amount of change in the company.

Interested in **blockchain**, **machine learning**, or **artificial intelligence**? See page 5.

Editor's Note: In this Industry Update "executives" will generally refer to the CEO, CFO, COO, and Vice President titles only. Unless otherwise noted, the data in this Update will largely come from LinkedIn and represents a snapshot of the market as it was at the time of the research. Is LinkedIn truly representative? Here's a little data: LinkedIn has approximately 722 million users, 174 million in the US and 163 million in Europe. (See Source) It is by far the largest and most robust business database in the world, now in its 18th year. LinkedIn defines the year over year change (YOY Change) as the change in the number of professionals divided by the count as of last year and "attrition" as the departures in the last 12 months divided by the average headcount over the last year.
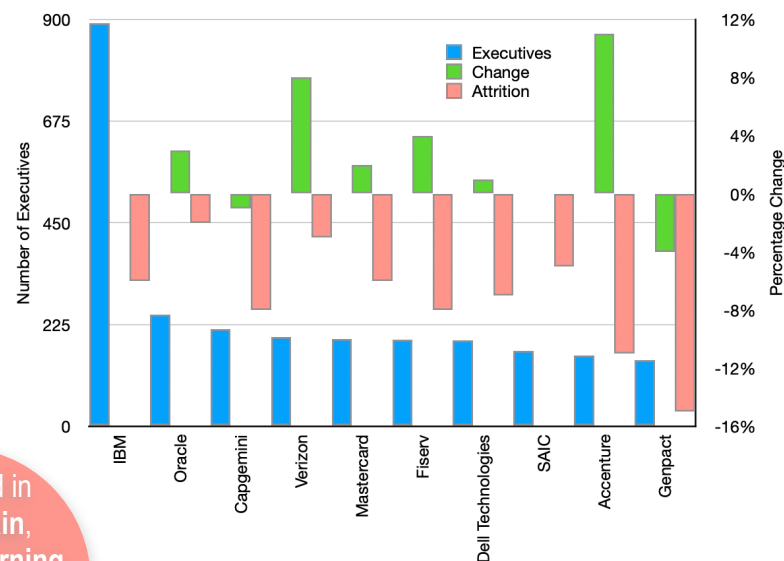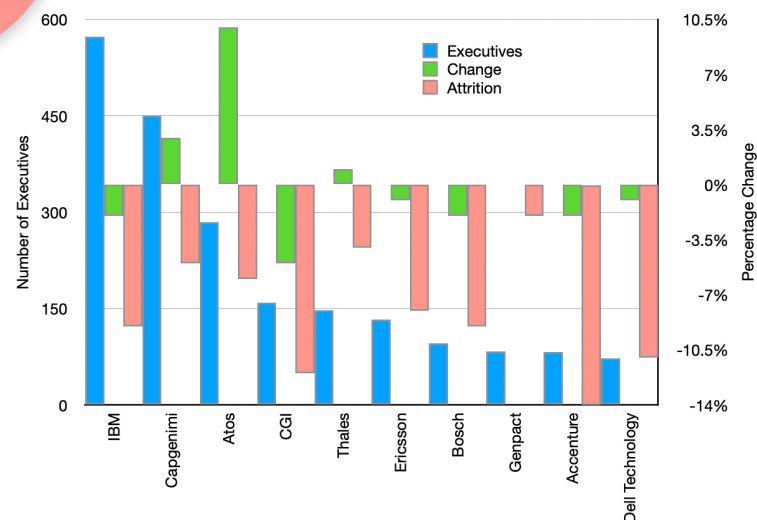

Chart 1: Top Employers of IT Executives in the US

Chart 2: Top Employers of IT Executives in the EU & UK

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Digging into the dynamics at several key players, we find that IBM is showing a recent up-tick in departures (34 hires, 55 departures) with the majority of the departing executives joining firms such as Kyndryl, Amazon (AWS), Red Hat, and CVS Health. There are no obvious trends in the relatively high attrition numbers for Capgemini or Mastercard. Fiserv shows a spike in departures in April with three departing executives joining Conduent and three new hires from JP Morgan Chase during the past year. Accenture has been on a hiring streak recently, recruiting from Deloitte, KPMG, and EY among others after losing a few executives to Amazon (AWS) and IBM. Genpact's attrition occurred mainly at the end of 2020 (23 departures vs. 16 hires), the departures leaving for IBM, Cognizant, Newmark, and Amazon (AWS)—two each.

As evidence of the growing concentration in this business sector the list of top players in the EU & UK cohort (Chart 2) includes five of the top employers from the US group but also five entries unique to the EU and UK at positions 3, 4, 5, 6, and 7 on the top employers list. IBM does not stand out as starkly in this ranking either, though it is also showing negative growth and higher attrition than in the US. Attrition seems to have ticked up recently at IBM in this geography with 52 departures versus 29 hires (per LinkedIn) for a net minus 23 change in the executives as we define them. Where did these executives go? Notably, eleven of them went to Kyndryl, three to Salesforce, and two to Amazon (AWS).

CGI also shows a net loss of executives at the moment (6 hires, 20 departures). Exxeta AG and Capgemini account for four of these departures, but the rest are well distributed among other players. Both Ericsson and Bosch showed a spike of departures in late 2020 but their executive ranks have steadied through the balance of 2021. Accenture has also shown an up-tick in departures quite recently (7 hires, 12 departures) to a very diverse group of hiring companies.

In the EU & UK cohort (Chart 2), Atos claims the highest growth rate at 10% year on year (YOY). Digging a little deeper into this high growth rate at Atos, we find that they hired executives mainly from Accenture, Dell Technologies, CBRE, and a range of less well known players and lost a few to Cognizant, Expleo Group, and Accenture, too. Accenture in this grouping shows rather high attrition (-14%), but

the deeper dive does not reveal any single net destination for these departures. Rather, they left for a broad range of companies across the EU & UK.

As far as where the executive jobs in the IT industry are, there are relatively few surprises in the US (Chart 3), where New York tops the charts at more than 12,000 with 3% YOY growth and a hiring demand characterized by LinkedIn as "high." That Washington DC comes second may indeed be a surprise, though when one thinks about all of the government business available inside and around the beltway, perhaps this is not surprising at all. Belying their relatively modest growth rates, San Francisco, Dallas Fort-Worth, Chicago, and Boston all rate "very high" per LinkedIn in terms of hiring demand.

Chart 3: Top Locations of IT Executives in the US
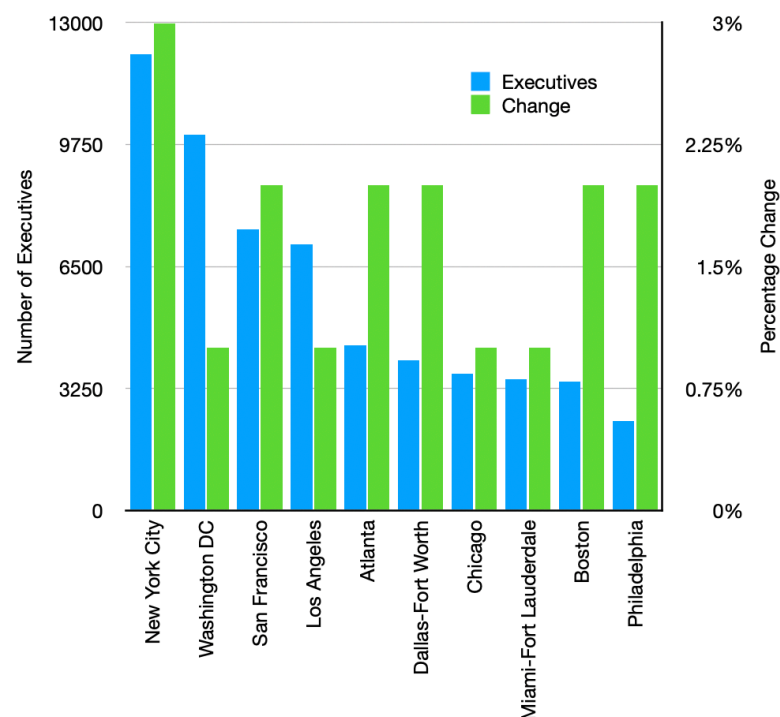
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In the EU & UK group (Chart 4) London and Paris come out on top, but it is interesting to see cities such as Milan, Warsaw, Munich and Berlin also entering the ranking with strong growth as well. All of the European cities listed above are described by LinkedIn as having "very high" hiring demand, and indeed the overall growth in executives employed in the sector seems quite healthy.

Business Admin and Computer Science vie for the top position as far as Fields of Study are concerned for this business segment (Charts 5 & 6), though Finance and/or Economics, as well as Electrical Engineering and Marketing also make the list.

We are frankly disappointed to report that gender diversity is low in this industry. In the US, only 18% of these executive positions are filled by women, and in the EU & UK cohort this ratio drops to a mere 13%.

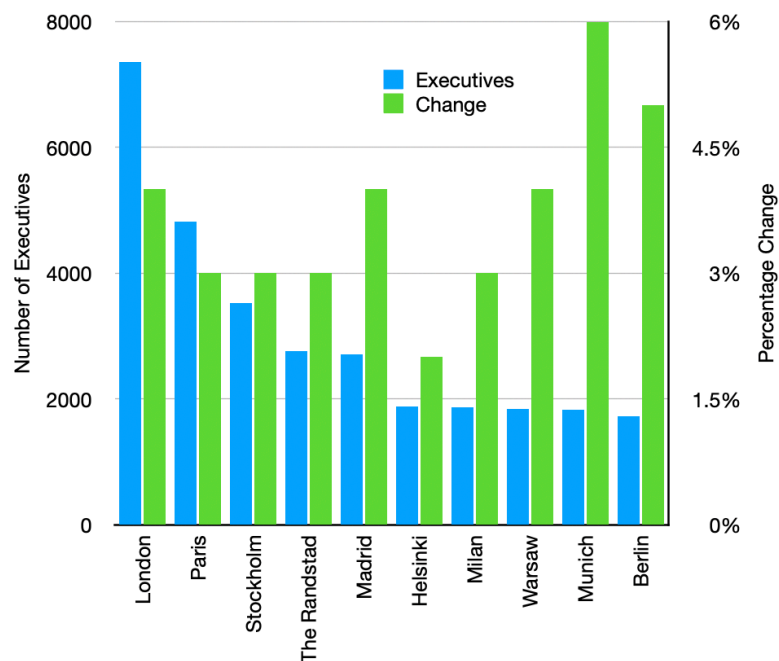### Chart 5: Top Fields of Study of IT Executives in the US

Field	Value
Computer Science	11,000
Business Admin	9,181
Information Technology	5,387
Finance	4,445
Accounting	3,720
Electrical Engineering	3,670
Economics	3,611
Marketing	3,316

Chart 4: Top Locations of IT Executives in the EU & UK
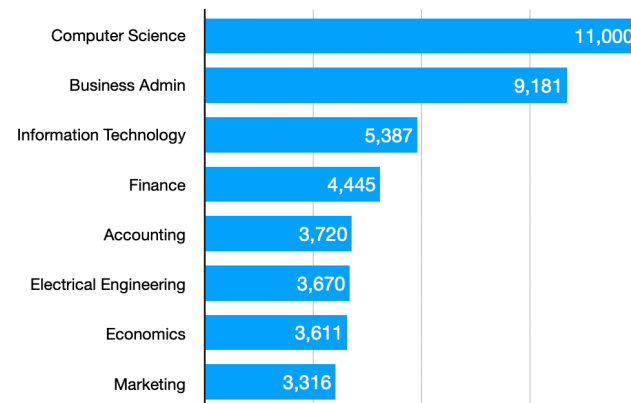
Chart 6: Top Fields of Study of IT Executives in the EU & UK

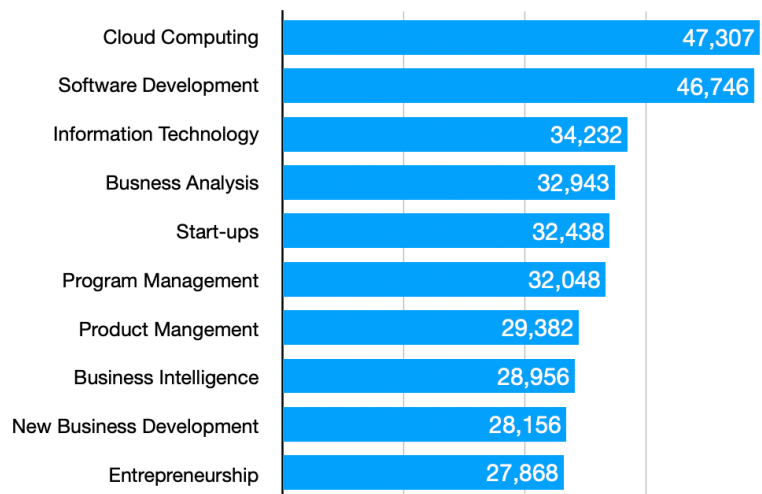| Field	Value
Business Admin	9,641
Computer Science	8,317
Economics	6,910
Information Technology	6,666
Computer Science	6,369
Marketing	3,285
Electrical Engineering	3,195
Informatics	3,054
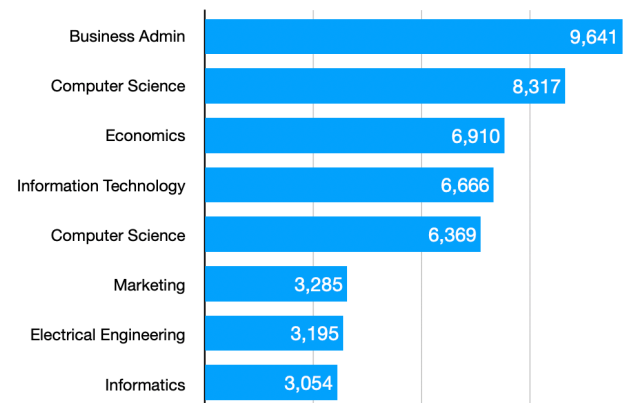
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There is little significant variation between regions as to the top skills cited by IT executives. These include a mix of highly technical and more generalist attributes. (Chart 7)

Chart 7: Top Skills Cited by IT Executives

Skill	Value
Cloud Computing	47,307
Software Development	46,746
Information Technology	34,232
Busness Analysis	32,943
Start-ups	32,438
Program Management	32,048
Product Mangement	29,382
Business Intelligence	28,956
New Business Development	28,156
Entrepreneurship	27,868

Information Technology - Middle East

Let us take a moment to briefly explore how the IT executive role is developing also in the Middle East. LinkedIn reports 17,280 executives as we define them in this industry segment in the Middle East, up 3% against prior year with 1,057 having changed jobs in the past year.

Chart 8 contains the top employers of IT executives in the region per LinkedIn, showing significant YOY growth at Ericsson and HP, versus high attrition at IBM and MalamTeam (Israel).

The key locations and growth rates in the region are contained in Chart 9, with all locations characterized as having "high" or "very high" growth in demand, except Iran ("low").

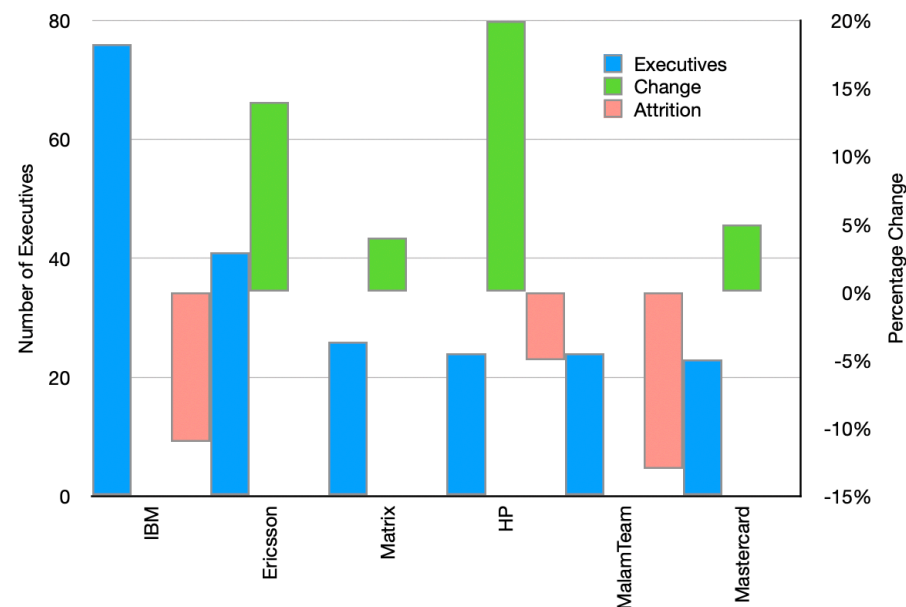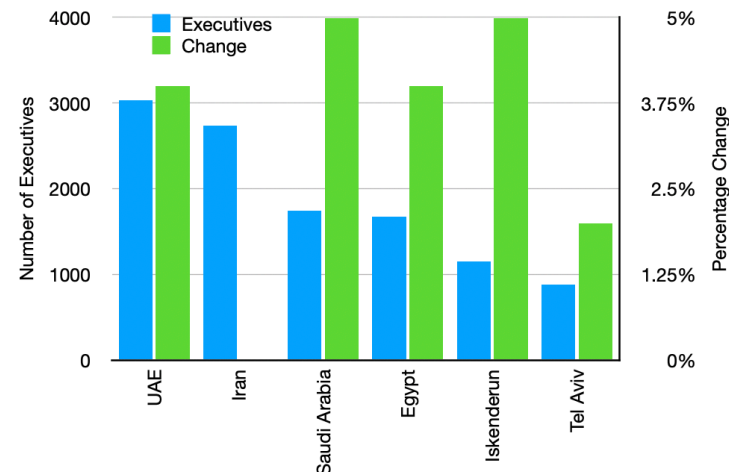### Chart 8: Top Employers of IT Executives in the Middle East

Legend: Executives (blue), Change (green), Attrition (pink)
Categories: IBM, Ericsson, Matrix, HP, MalamTeam, Mastercard

Chart 9: Top Locations of IT Executives in the Middle East

Legend: Executives (blue), Change (green)
Categories: UAE, Iran, Saudi Arabia, Egypt, Iskenderun, Tel Aviv

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Blockchain, Machine Learning, and Artificial Intelligence

Some executives may wonder whether they need to take recent developing trends in their industry seriously or just stay with what they know. In the IT sector there are certainly a number of up-coming technologies worth taking a deeper look at. Here we have merged the geographies (US, EU, UK and Middle East) on the theory that the market for these technologies is probably a global marketplace with a rather limited pool of executives.

Chart 10 bears this assumption out. The total number of executives as defined above that have referenced these technologies is relatively limited at less than 5% of the total executive pool addressed overall in this Update. It also exhibits a healthy growth rate of 4-6% YOY.

Per Charts 11 and 12, there are variations in the demand geography, though, with London, for example, still showing more interest in blockchain while San Francisco seems to prefer machine learning for now.

LinkedIn notes that most of these locations demonstrate a "high" to "very high" hiring demand for executives with experience in these technologies.

We suspect but cannot prove that some of the dynamics between the cities have to do with where employers in those cities are on the adoption curve: early investors versus "wait and see" followers, for example.

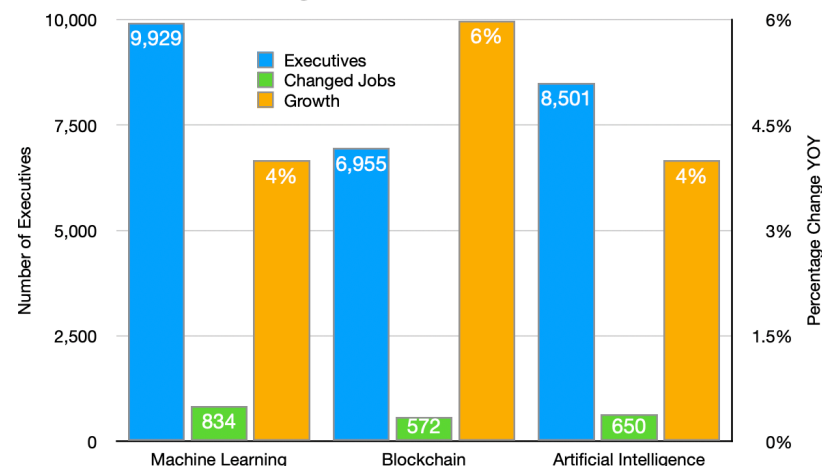Chart 10: Executives Referencing Up-coming Technologies in their LinkedIn Profiles

Chart 11: Executives Referencing Up-coming Technology in their LinkedIn Profiles
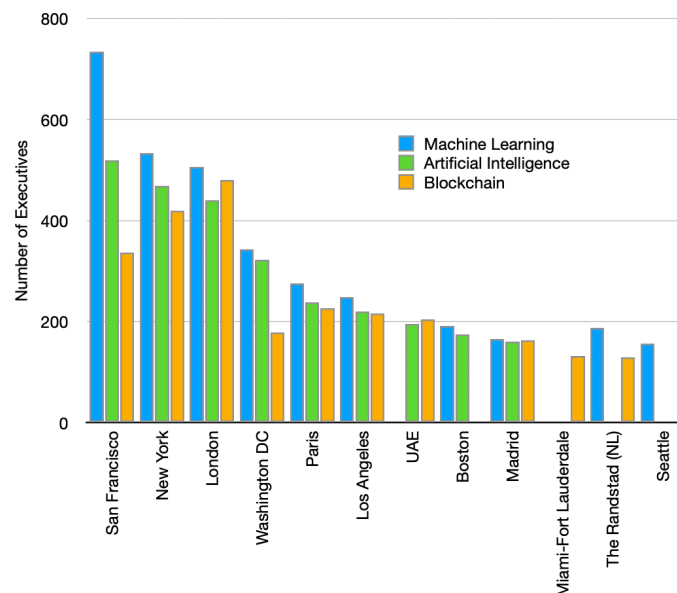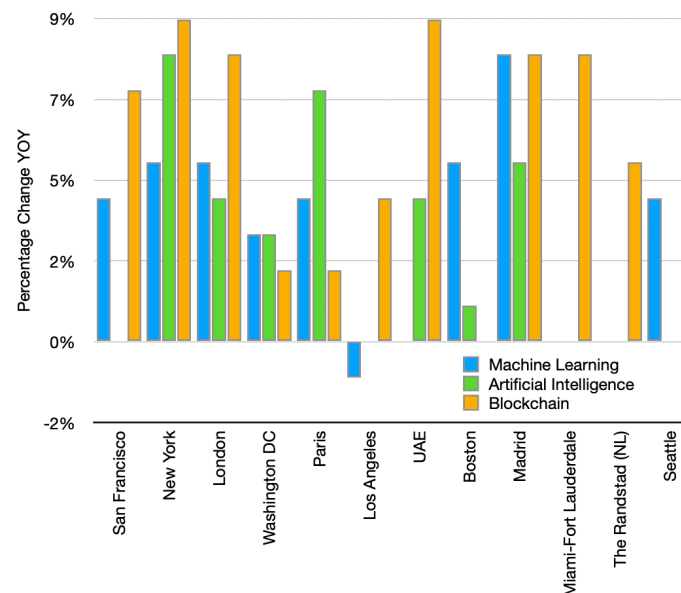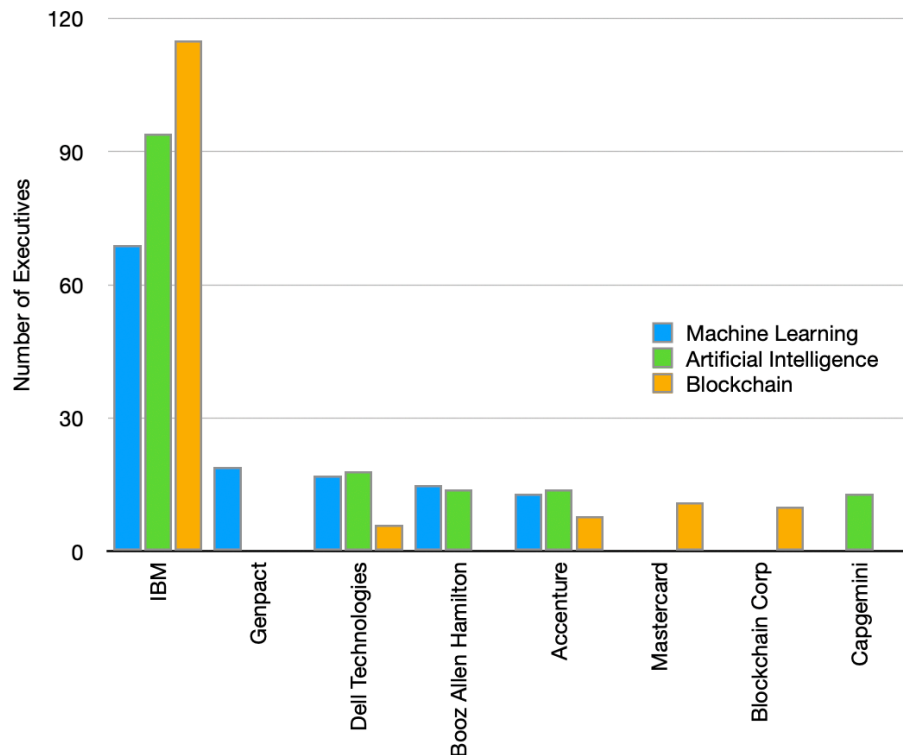

Chart 12: Change in Executives Referencing Up-coming Technology in their LinkedIn Profiles

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Chart 13: Top Employers of Executives Referencing Up-coming Technologies in their LinkedIn Profiles
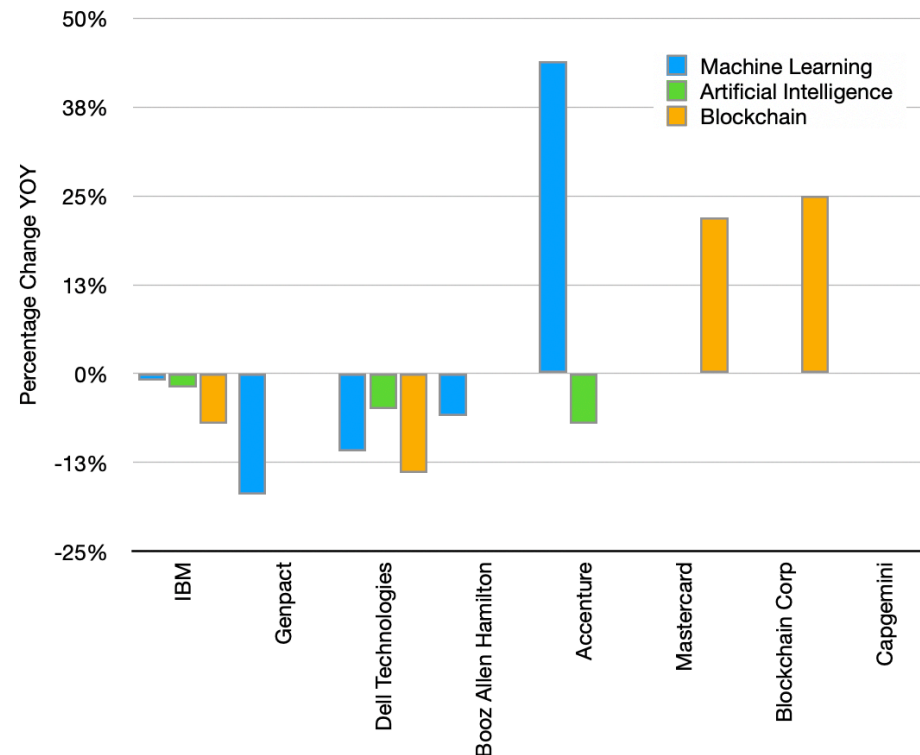

Chart 14: Top Employers of Executives Referencing Up-coming Technologies in their LinkedIn Profiles

The largest employers of these executives are predictably also a relatively small group with IBM employing the lion's share. Obviously, companies' focus appears to be quite different based on their hiring of executives with various skills in this area with Blockchain Corp. and Mastercard emphasizing blockchain which others emphasize machine learning and artificial intelligence.

The first four companies on Charts 13 and 14 also exhibited very significant attrition vis a vis these executives ranging between 14-24% in the past year. IBM for example in the machine learning area gave up executives to Amazon (AWS), Salesforce, Philips, Toshiba, and CVS Health among others, while gaining talent from Red Hat and Accenture.

In the blockchain arena, IBM had a steady drip of attrition to Kyndryl, Salesforce, Fiserv, CVS Health, and even Microsoft. On artificial intelligence, the story for IBM is similar.

Genpact hired from Infosys and Wolters Kluwer in the artifical intelligence area and lost talent to IBM and Mindtree, but hired one blockchain executive from IBM.

Dell Technologies saw one blockchain departure to Lenovo, one gain from KPMG on artificial intelligence as well as one loss to Aptiv.

Booz Allen Hamilton on the other hand, has seen a net departure in the machine learning area in favor of Amazon (AWS) and Deloitte.