



INDIAN SOCIETY OF CALGARY Presents

IT Industry Overview: Trends and learning Opportunities

IT Industry: Trends And Learning Opportunities

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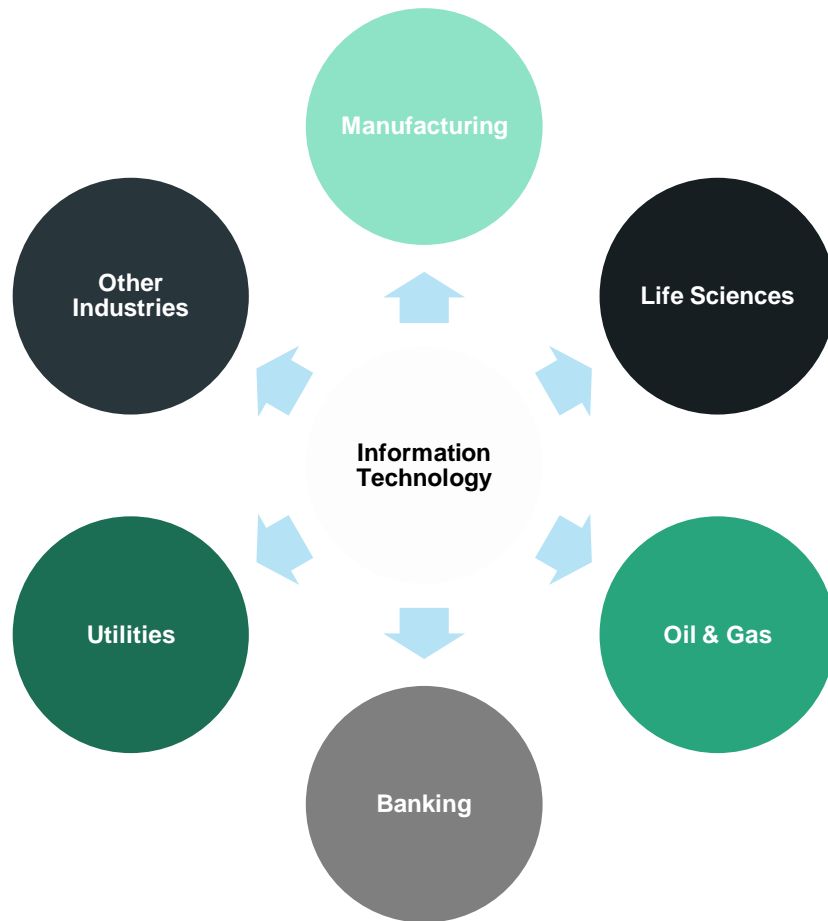
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IT Industry Overview



Information Technology industry often referred as “Tech Industry” deals with design , development , implementation, support and management of Computer Systems. This includes software, hardware and services. Some of the key highlights of industry include

- ❑ Includes Software Development, Support Services, Solution Implementation
- ❑ One of the fastest growing industry with diverse opportunities.
- ❑ Supports all major industries/sectors including and not limited to Banking , Life Sciences, Oil & Gas, Utilities, Healthcare, Insurance, Manufacturing, Retail and many more.
- ❑ Constantly changing as new technologies are evolving faster then ever.

Key Skill Areas in IT Industry

- ▶ Some Key areas within IT Industry and related skills
 - ▶ Programming - Python, Java, Javascript, C#/C++, PHP, R, Swift
 - ▶ Database - SQL, RDBMS, Oracle DB, MS SQL Server, IBM DB2
 - ▶ Web Design - HTML , CSS, Javascript
 - ▶ Software Testing - S/W Development Methodologies, Testing Tools (HP ALM, UFT), Automation Testing
 - ▶ ERP Systems - SAP, MS D365, Oracle Netsuite
 - ▶ Data Analytics and Data Science - Tableau , SQL, Excel, Statistics, Languages like R, Python, ML, Teradata
 - ▶ Operating System and Networking Infrastructure - Vmware, Windows , UNIX
 - ▶ Artificial Intelligence - Mathematics((Probability and Stats) and Algorithms, Python, C++ , R, OS, Hardware
 - ▶ Cloud Technologies - Amazon Web Services , MS Azure , Google cloud
 - ▶ IOT - Hardware, Networking, Arduino, C, Programming
 - ▶ Business Analysis and IT Project Management - Industry Domain Knowledge and Management
 - ▶ Security - Network Security/Cyber Security
 - ▶ Mobile App Dev - Java or Swift, XML, Android SDK

IT Aspirants

- ▶ Beginners - (Non IT Background)
- ▶ Beginners - IT Background, No Industry Experience
- ▶ Experienced - Working in IT industry, Aspiring to Up the Skills

Good Skills To Start

- ▶ **Potential Skills to Target for Beginners - (Non IT Background)**
 - ▶ Develop basic understanding of Computer Systems, Hardware/Software
 - ▶ One of the programming languages Python, PHP, Java and get certified
 - ▶ Software testing courses for beginners and get certification from institute like ISTQB
 - ▶ Business Analysts Courses and Certifications
 - ▶ Beginner Web Designer skills like HTML, CSS
 - ▶ Project Management if from management background or targeting PMP
 - ▶ Basic DB Skills. SQL and RDBMS concepts.

Note : These suggestions are based on my perspective and understanding within industry.
Please choose skills to learn based on your interests and capabilities

Good Skills To Start

- ▶ **Potential Skills to Target for Beginners - IT Background, No Industry Experience**
 - ▶ Learn Database skills and then target courses/certifications
 - ▶ One of the programming languages Python, PHP, Java and get certified
 - ▶ Software testing courses for beginners and get certification from institute like ISTQB
 - ▶ Data Analytics and Data Science courses
 - ▶ Operating System and Networking Infrastructure
 - ▶ Mobile Development, Learn Java or Swift, XML, Android SDK

Note : These suggestions are based on my perspective and understanding within industry.
Please choose skills to learn based on your interests and capabilities

Good Skills To Start

- ▶ **Potential Skills to Target for Experienced - Working in IT industry, Aspiring to Up the Skills**
 - ▶ Data Analytics and Data Science courses
 - ▶ Artificial Intelligence
 - ▶ Python, R, Machine Learning
 - ▶ Cloud Technologies (AWS, Azure)
 - ▶ Internet Of Things. Small Projects on Arduino (For Beginners) or Raspberry Pi
 - ▶ ERP Systems

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Trends in IT

- ▶ Global IT Industry has been a growing industry.
- ▶ Many major organizations increasing their spending on Digital Transformation.
- ▶ Demand for skilled professionals in Cloud Technologies
- ▶ Artificial Intelligence Jobs are growing and expected to see good demand in coming years
- ▶ Ever Growing Data is a biggest concern for most of the organizations and Data Science and Analyst jobs are in demand as well
- ▶ Internet Of Things is an emerging area in IT as more devices are getting connected. (41.6 billion **connected IoT devices**, or "things," generating 79.4 zettabytes (ZB) of data in 2025: Source IDC)
- ▶ Demand for IT is projected to increase in Canada as well. Toronto, Montreal and Vancouver being major hubs. Some of the jobs in demand are Developer, QA Analyst, Cloud Technologies, Project Management, AI.

From Where To Begin

- ▶ If Non IT, you could start by basic understanding of Concepts in IT. Refresh previous learning if from IT
- ▶ There is no right or wrong skill to start learning. It all depend on your interest and capabilities.
- ▶ Pick up an area you feel interested in and start with some free courses and do hands on
- ▶ Could Enroll for paid courses on the areas that interest you. Courses from universities or from learning sites. Think before enrolling for paid courses.
- ▶ Go For Certifications for the course you studied based on your preparation and confidence level. Do remember certifications comes with a cost.
- ▶ Build your contacts with people working in the industry, keep exploring Job trends on professional networks and sites like LinkedIn, Glassdoor, Indeed, Monster.
- ▶ Could Start some freelancer jobs on sites like freelancer, ifreelance and upwork based on your skills.

Setting the Right Expectations

- ▶ A good start could be with a self assessment of your capabilities and interests.
- ▶ Good growth aspect in the industry with decent pay for people with right skills. Rapid change in technology is expected to keep adding to demand.
- ▶ Challenging most of the time with a prospect for learning new technologies.
- ▶ Constant need to upgrade your skills to catch up with the changing technologies.
- ▶ Flexible work options based on organization you work for, though burnouts are common too
- ▶ Lot of focus and efforts are required initially. Patience is the key for beginners

Useful Study Sources To Begin With

There are many sites available on internet. These are some of the potential sites you can start with. This is just a general opinion, please explore additional sites according to your interests.

- ▶ Could create an account on <https://www.udemy.com/> , https://join.shawacademy.com/?utm_source=google&utm_medium=cpc&utm_campaign=ca_search_brand_core_exact and <https://www.coursera.org/> to start exploring some of the free courses for beginners or buy more advanced courses.
- ▶ Sites to Practice and Learn Python @
<https://www.python.org/about/gettingstarted/>
https://colab.research.google.com/notebooks/intro.ipynb#scrollTo=GJBs_flRovLc
- ▶ Sites to Learn SQL (Good for beginners) <https://www.w3schools.com/sql/>
- ▶ An option for AWS access for practicing <https://aws.amazon.com/>
- ▶ Site for Basic and Advance HTML <https://www.codecademy.com/learn/learn-html>
- ▶ Some Freelancer Jobs sites <https://www.freelancer.com/> and https://www.upwork.com/?gclid=EAlalQobChMIjq3N4vWv6glVBwB7Ch1utAueEAAYASAAEgKvY_D_BwE
- ▶ Testing Certifications datils on <https://www.istqb.org/>