

## TOPIC 3 – CAREER IN COMPUTER PROFESSIONS

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### LEARNING OUTCOMES

By the end of this topics, you will be able to:

1. Discuss a career in IT
2. Explain differentiate between CV/ Resume and cover letter
3. Write a resume /cover letter and conduct online interview

### INTRODUCTION

Perhaps you have a knack for learning new languages, or maybe you were so intrigued with your computer that you ripped off the cover and started to tinker with the inner workings. If so, computer science might be an ideal career choice for you. Given the pervasiveness of computer technology in today's society, there are many different job options open to the computer science major. The right job for you will depend on your personal skills, values, and interests.

#### 3.1 Expectations of graduates

Occupational shortages have caused great concern for many businesses since the last recession, and the market for attracting the best and the brightest is ever more competitive. Therefore, it is vital for employers to understand what graduates expect and desire from their first graduate job. Feeling well informed and supported is important for an employee's wellbeing, their success within a company example:

- Inspire them. Getting and training the right people takes time and money - give them the reasons they need to stay and thrive. Give them a clear career development path and help them understand how to get on, earn more and be satisfied in their roles. A little segmentation might also go a long way.
- Gender matters. It isn't that females aren't interested in the money, but delivering value to them could be more complex. It isn't that males were only interested in the money, but the relationship between their investment in their career progression and salary might need to be communicated more clearly. It might be that employers need to order their messages differently, making sure that communications with their graduate employees are more segmented and resonate well.
- Tell them what a range of graduate careers can look like. If you're first in family, you might expect more because you don't know how a wide range of graduate careers behave. Your knowledge isn't tempered by the stories you have from your parents of

hardships and climbing the graduate employment ladder. This audience may be more susceptible to marketing messages which can focus on the best-case scenarios and blue-chip graduate schemes because they don't have personal narratives to counter them. They were more likely to expect to be invested in by their employer, in terms of thought and time.

### 3.2 Career Opportunities

Let us consider what is involved in a career path in each area refer to the Figure 3:

<b>Application programmer</b> Codes application software.	<b>Multimedia developer</b> Develops multimedia content for Web sites and applications.
<b>Business analyst</b> Identifies the business needs of a system and makes sure systems meet those needs.	<b>Network and computer system administrator</b> Responsible for planning and implementing computers and networks within an organization.
<b>Chief information officer (CIO)</b> Oversees routine transaction processing and information systems activities, as well as other computer-related areas. Also known as the <b>vice president of information systems</b> .	<b>Network engineer</b> Responsible for the overall implementation, maintenance, and optimization of network hardware, software, and communications; called <b>cloud network engineer</b> when the infrastructure is cloud based.
<b>Cloud architect</b> Evaluates a company's computing needs and deploys appropriate cloud solutions to meet them.	<b>Network operator/troubleshooter</b> Responsible for overseeing the day-to-day activities for a network, such as troubleshooting problems, documenting network events, and performing necessary duties to keep the network operating smoothly.
<b>Cloud engineer</b> Plans and conducts technical tasks associated with the implementation and maintenance of virtualized or cloud systems.	<b>Network systems and data communications analyst</b> Manages the networks in an organization and determines what changes, if any, are needed. Also known as a <b>network architect</b> .
<b>Cloud product manager</b> Plans the concepts, strategies, positions, and sales used with cloud-based products.	<b>Network technician</b> Installs, maintains, and upgrades networking hardware and software.
<b>Cloud services developer</b> Designs and builds the end-user interfaces and tools used with cloud services.	<b>Security specialist</b> Responsible for seeing that an organization's hardware, software, and data are protected from hackers, malware, natural disasters, accidents, and the like. Also known as the <b>chief security officer (CSO)</b> .
<b>Communications analyst</b> Analyzes, maintains, and troubleshoots data communications networks and assists with connectivity.	<b>Software engineer</b> Designs and builds complex software applications. Also known as an <b>application software engineer</b> or a <b>systems software engineer</b> ; called a <b>cloud software engineer</b> when the software is cloud based or integrates with cloud services.
<b>Computer operations manager</b> Oversees the computer operations staff and facility.	<b>System administrator</b> Responsible for maintaining a large, multiuser system; called <b>cloud systems administrator</b> when the system is cloud based.
<b>Database administrator</b> Responsible for setting up and managing large databases within an organization.	<b>System programmer</b> Codes system software, fine-tunes operating system performance, and performs other system software-related tasks.
<b>Database analyst</b> Responsible for designing and developing an organization's data flow models and database architecture.	<b>Systems analyst</b> Studies systems in an organization to determine what changes need to be made and how to best accomplish these changes.
<b>Data center architect</b> Manages the whole data center environment, including servers, virtualization, power, cooling, security, and so on.	<b>Systems engineer</b> Oversees and coordinates the various engineering tasks performed during systems development.
<b>Computer operations manager</b> Oversees the computer operations staff and facility.	<b>System administrator</b> Responsible for maintaining a large, multiuser system; called <b>cloud systems administrator</b> when the system is cloud based.
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<b>Data center architect</b> Manages the whole data center environment, including servers, virtualization, power, cooling, security, and so on.	<b>Systems engineer</b> Oversees and coordinates the various engineering tasks performed during systems development.

Figure 3: Example of Career Opportunities in Computing Profession

### 3.3 Comparison between a Curriculum Vitae, Resume and Cover Letter

While reading job postings, you may have noticed some employers ask for a resume, others ask for a curriculum vitae commonly referred to as a “CV” and a few may ask for a “resume/cv.” While both resumes and CVs are used in job applications (and some employers may use the terms interchangeably), these two documents have a few distinct differences.

- A CV (abbreviation for the Latin word curriculum vitae, or “course of life”) is a detailed and comprehensive document which describes the course of your academic and professional accomplishments. It’s usually formatted in chronological order and starts with your educational experience. While there is no length requirement on a CV, most range from three to ten pages though some might be even longer. Generally, the more experience you have, the longer your CV will be.
- A resume is a document that summarizes your career history, skills and education. The term originates from the French word résumé, which translates to “abstract” or “summary.
- A cover letter indicates interest in the open position and briefly encourages the reader to also read the resume. These days, many companies routinely discard cover letters. Since you never know which companies might do this, go ahead and send a cover letter with the resume.

### 3.4 Producing a good CV and resume

The best way to demonstrate your personal skills and qualities to the employer is during the job interview. Unfortunately, to get a job interview you have to be shortlisted based on your CV, cover letter and job application. One way to solve this problem is to make mention of your personal attributes and traits on your CV. This will give the employer the assurance that you do possess soft-skills which will aid you in your job.

Below you will find a list of skills and personal qualities that you can use on your CV. These attributes have been specifically selected due to the value that employers attach to them:

#### **1. Interpersonal skills**

Your interpersonal skills are your abilities to communicate and interact with others. Examples of interpersonal skills include communication (verbal, written and listening), interpretation body language, managing emotions, negotiating and resolving conflicts. This is probably the single most important personal skill to include on your CV as it is essential for almost all jobs and highly valued by employers.

## **2. Teamwork skills**

Your teamwork skills refer to how well you work with others in a team.

Key activities in teamwork include sharing information, helping to resolve a problem, working towards common goals, properly dividing tasks between team members, etc.

The reason why employers value team players is because everyone, no matter what their job is, will be working together with others to achieve certain goals or objectives. That is the very definition of a team. Therefore, we are all team players and employers prefer the candidates that possess or have demonstrated excellent teamwork skills.

## **3. Leadership skills**

Leadership is an important quality to have, even when you're not in a management or leadership position.

This is because leadership consists of many other components that are desirable in any employee, including taking responsibility for one's own work and mistakes, having a long-term vision and not be short-sighted, being productive at all times and leading others to a successful outcome.

Possessing these characteristics means you do not need someone to spoon-feed you or hold your hand on a daily basis in order for you to do your job.

An effective way of demonstrating leadership skills on your CV is to mention any leadership positions you have held in the past;

- Project manager
- Class representative (in college or university)
- Leader/coach/captain of a sports club or team.

## **4. Enthusiasm and personal drive**

No employer wants to employ a candidate who takes forever to do the most trivial of tasks or sighs deeply whenever asked to do something. These type of candidates lack enthusiasm and personal drive. Employers are more interested in people who are enthusiastic about what they do; completing tasks with excellence and always looking forward to the next one.

How can you demonstrate this on your CV? You could use CV keywords such as “passionate”, “driven” and “motivated” when speaking about your previous jobs, accomplishments or career aspirations.

## **5. Initiative**

Your initiative is your ability to initiate or start things independently. It means that you do not sit and wait for things to happen or common to you, you make things happen and you make things come to you. You are always taking the first step when required, and are never idle in the face of obstacles or challenges. How to indicate that you have the initiative on your CV:

Mention any projects, tasks or activities that you have started independently.

Mention any suggestions, improvements or ideas that you have put forward which has helped people in your previous job(s). For example, you suggested the introduction of a new IT system.

## **6. Management and organisational skills**

Management and organisational skills are essential personal attributes which are required in most, if not all, jobs. Research has shown that most projects and tasks fail because of mismanagement. Proper management of time, resources and focus can really do wonders in the workplace and make most projects, activities and organisations successful.

### **3.5 Preparation for interview session**

An employer will invite you for an interview if they believe that you have the skills to succeed at their company. In the interview, they will seek to evaluate your genuine interest in the company and the role, your preparedness for the position, and your potential to add value to their team

Your answers to the questions they ask will help them assess your skills, experience, and motivation. Below, you will find suggestions on how to prepare for the interview and demonstrate that you are the best candidate for the position.

## **RESEARCH THE COMPANY AND INDUSTRY**

- We often hear from employers that candidates do not know enough about their companies when they interview. Employers gauge how interested you are by how much you know about their organization. This research is an easy way to improve your interview skills.
- Find out as much as you can about the position, company, and industry.
- Learn about current trends and events that might impact your future employer.
- Review the organization's website and social media activity.
- Try to speak to people in the organization through LinkedIn, peers, faculty, or family to gain insider knowledge.

- Make sure that you reread the job description and can communicate why you would be a good fit for the position.

### **IDENTIFY YOUR GOALS AND SKILLS: WHY DO YOU WANT THIS JOB?**

- It is important to have a purpose in mind and communicate it to the employer. You will need to be able to show that you can support the company's needs.
- Think about how the combination of your work experience, personal qualities, and academic or co-curricular activities make you uniquely qualified for the position.
- Describe the skills in your resume with examples using the SARA method (Situation, Action, Result, Application).
- Identify transferable skills and make the connection between your experience and the position requirements.

### **YOUR CHANCE TO INTERVIEW THE EMPLOYER**

- While the main goal of the interview is for an employer to evaluate you as a candidate, it is also one of your few chances to learn more about them. There are many aspects of a job that you can only uncover by speaking with the employer.
- Identify questions that can help you determine if this is the right position for you. Consider asking questions about the role, division, organization, and industry.

### **PRACTICE YOUR INTERVIEWING SKILLS**

Many people practice for an interview by writing down answers to common interview questions. While organizing your thoughts on paper is helpful, the best practice is done verbally, alone, with a friend, mentor, or career counselor.

#### **3.6 Online Career Test**

A career test (also called a career aptitude test) is a series of questions that aim to help you learn more about yourself so you can discover which jobs mesh best with your personality, needs, and goals. Because when it comes to finding a job you'll actually enjoy doing, you need to consider factors beyond your paycheck, commute time, and the like. You also need to think hard about what kinds of work and environments fit in with you and will provide you with the most satisfaction in both the short and long term.

That doesn't mean you need to go on some soul-searching walkabout; a career test or career quiz is a practical tool that can offer insights as to what makes you tick, whether you're choosing or changing your career.

Among the factors a career test may cover:

- skills
- strengths
- interests
- emotional intelligence
- values
- personality traits
- motivations

And while many career tests work best when administered in full by a professional who can interpret the results, the 10 self-assessments listed (example: myplan.com, isseek clusters, mynext move, MAPP Test, Holand Code Career Test, and PI Behavioral Assessment) can give you a sense of where you should be headed and how you should be marketing yourself. Many of these are free career tests so you can get started without your having to spend a single cent.

### 3.7 Persuasive communication, negotiation skills and teamwork

Persuasion skills are an important tool for employees in every industry. The ability to influence others, present effective arguments and prompt others to act is a valuable asset that can be beneficial in a range of workplaces. If you are interested in learning how you can improve your persuasive skills, you will need to understand everything the term entails. In this article, we examine the different types of persuasive skills, offer some tips for how to persuade effectively and explain how to improve your persuasive skills.

Persuasion is the process of convincing someone else to carry out an action or agree with an idea. In the workplace, persuasion is used to sell products, recruit team members and increase productivity. An employee with strong persuasion skills can influence others to perform well and succeed. A persuasive employee is also able to expedite and facilitate group decision-making. When used well, persuasion is a valuable soft skill that can have a significant impact in any workplace.

### 3.8 Social Implication of IT and ICT's

Information communications technology (ICT) has the power to transform society. It plays a key role in each of the United Nations' Sustainable Development Goals, providing the infrastructure needed to achieve them. It also enables financial inclusion through m-commerce and allows people to connect with millions instantaneously.

The impact of ICT on business is particularly significant. It empowers people to share knowledge and advice instantaneously and set up an online shop or website at a low cost, dramatically lowering the barriers to starting a business. As such, it is an important enabler of change and ICT maturity is closely linked to economic growth.

ICT is developing social businesses in three main ways:

#### Affordability

- Starting any business can be financially challenging. But for social entrepreneurs, whose primary intent is to engage with local communities rather than to make profit, it can be particularly daunting. In the initial stages, it can also be difficult to convince investors to part with their money for a social cause.
- ICT solutions have decreased set-up costs in an unprecedented way. This helps social entrepreneurs to make it through this uncertain period without major investments or losses – and advice is only the click of a button away.

#### Scalability

- ICT infrastructure allows us to connect instantaneously with millions. For social entrepreneurs, this means that their initiatives aren't just limited to one community; they can easily reach the people they want to empower and spread their message far and wide.
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#### Community

- To ensure lasting empowerment, social businesses work from within the community. As previously highlighted, ICT allows social entrepreneurs to continuously connect with the people they wish to empower in a direct and engaging way.
- Online channels are also an incredibly powerful way to broadcast business messages. Although the presence of a social business is very much on the ground within the community, its story can be told online through webpages and social media, reaching a global audience.



