California State University, Los Angeles

Career Report
Information Technology

Giancarlo Huamani
Sergio Mendez
Jose Mendoza

Business Communication 3050
Prof. Nina O'Brien

April 2017
## Contents

Summary ................................................................................................................................... 2

Intro to Programming and Web Development ................................................................. 5

Skills that every IT student should have ............................................................................. 6

Statistics of the job opportunities.......................................................................................... 8

Advantages and disadvantages associated with employment on IT ................................... 9

Advice for the future students considering a career in IT ................................................. 10

Reference list..........................................................................................................................12
Summary

This report is directed to undecided Freshman, Sophomore, Junior/Transfer, and Senior college students deciding if a career in Computer Information Systems is better suited to them. Throughout the paper, it will be given a broad definition of terms pertaining to Information Technology; how is technology being embraced into every daily lives; what is the impact of technology affecting us; the relevance of the IT professional in the workplace; and the necessity to adopt this field into every serious businesses. Then we will expand into looking at one aspect of IT and the pros of working in this field. And we close with advice for students considering going for IT.
What exactly is Information Technology anyways?

When it comes to Computer Information Systems (CIS), used interchangeably with Information Technology (IT), what is the one thing that comes into a student’s mind? Computers, and technology. You see, technology is now ubiquitous in the lives of people across the globe. You can guess with certainty that every person that you encounter will have a smartphone or a computer at home with access to the Internet. And on the Internet, there are tons of programs and applications that people use every day, and such technologies are even opening up new ways of interacting with each other (Sullins, 2012). All of this was possible thanks in big part to, but not only, to Computer Information Systems.

The field of Information Systems or Information Technology is involved with the design, development, implementation, and management of computing infrastructure and computer applications in all types of enterprises and organizations. That being said, the undergraduate student is exposed to a large range of course subjects that include: accounting, economics, finance, marketing, and to a larger extent: data analytics, coding, and entrepreneurship. All of these courses combined is what makes a prospect student in IT so versatile and applicable to a myriad of companies.

Big companies like Facebook, Google, and Amazon have their infrastructure based on the control of information and use of computers to process data. Those factors are what IT was made for, mostly on the technology aspect of the career, to manage this immense flow of data that these companies get from people visiting/using their services.

One of the most significant outcomes of the progress of Information Technology is probably electronic commerce over the
Internet, a new way of conducting business. Though only a few years old, it may radically alter economic activities and the social environment. Already, it affects such large sectors as communications, finance and retail trade and might expand to areas such as education and health services. It implies that seamless application of information and communication technology along the entire value chain of a business that is conducted electronically.

Information Technology has become a necessary element on an increasing number of businesses, playing important roles in large enterprises, but also on medium enterprises, on the execution of decision-making processes (Pierre, 2012). This is proof of the ever-expanding field that is Business Intelligence, a subset of Information Technology, where data is king. Data is basically recording the actions that customers take when browsing or purchasing a product from a vendor’s website. Almost every company does that, and all that collected information is displayed into charts and spreadsheets for the vendor to learn about customer purchasing patterns, thus making more effective moves to cater to customer.

Now, in regard to get to work in this field, a student must specialize on an area of CIS. There is no way a student can be proficient on all areas that CIS covers. Multitasking has been proved it does not work well, therefore, one can pick from an extensive range of careers that extends from business to computer science, and make it his/her specialty.

For this report, we are going to keep it short and detail an area of CIS that requires a high skill requirement, as well as having a high demand in the labor force, as well as presenting a job opportunities chart listing several other IT fields and how each they weigh one to another, and finally, some tips from fellow seniors to potential CIS undergraduates on how to succeed on the IT path.
Intro to Programming and Web Development

All the interactions from video games, applications on the mobile devices and computers, websites, have one thing in common: they use a variety of programming languages. Why is this important? How can programming incorporate into the CIS field, or implement it into a career? These are one of many questions that a student comes into mind when a student is focusing on specific paths. Programming and web development are one of the most demanded and popular career paths students take during college.

Programming Languages

Ever wonder when using the computers, desktops, mobile devices, the how the applications to interact with the computer? Ever wonder how these applications were created? There are many programming languages that are fun to learn, and useful. In this demonstration, we will explain the most popular languages that are in high demand in the IT field worldwide.

Java

Java programming is the most popular and most demanding programming languages in the programming world. It is an object-oriented language used for enterprise software, web-based content, games, mobile apps and Android operating system.
Web development

How do these web sites come into play? How did each website have a unique design that makes the website look good? It is all based on coding and knowing databases. There are several languages that make up the way how websites run.

Skills that every IT student should have

Information Technology jobs are process-based occupations. Development, documentation, analysis and design, testing and implementation, are some of the skills that have been identified to appear across multiple IT fields, according to the National Workforce Center for Emerging Technologies.
But, Employers are constantly looking for candidates who think systematically and can solve problems through methodical approaches, conduct research, develop a series of rational solutions, test solutions effectively, verify problems are solved, and document the solution. Here is a list of the most common skills employers look for:

- Communication
- Organization
- Critical Thinking
- Decision Making
- Programming languages
- Software and hardware
- Systems architecture
- Internet principles
- Vendor certifications
- Industry practices.
It is well known that salaries are on the rise for information technology professionals. The average between all the IT careers is around $85,000 per year per the BLS (Bureau labor statistic). The table below details 2014 salary data for some of the most common IT occupations. It's important to notice that this is a national statistic, and that salary varies by experience, location, certifications, industry and employer.

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>AVERAGE</th>
<th>LOWEST 10%</th>
<th>TOP 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software developers, systems software</td>
<td>$106,050</td>
<td>$63,250</td>
<td>$154,800</td>
</tr>
<tr>
<td>Database administrators</td>
<td>$82,280</td>
<td>$44,470</td>
<td>$123,780</td>
</tr>
<tr>
<td>Network and computer system admins</td>
<td>$79,770</td>
<td>$46,220</td>
<td>$120,000</td>
</tr>
<tr>
<td>Software developers, applications</td>
<td>$99,530</td>
<td>$56,310</td>
<td>$149,480</td>
</tr>
<tr>
<td>Computer systems analyst</td>
<td>$87,320</td>
<td>$50,780</td>
<td>$129,980</td>
</tr>
<tr>
<td>Information security analysts</td>
<td>$91,600</td>
<td>$50,300</td>
<td>$140,460</td>
</tr>
<tr>
<td>Computer user support specialists</td>
<td>$51,500</td>
<td>$28,280</td>
<td>$80,180</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Computer network support specialists</td>
<td>$66,140</td>
<td>$35,870</td>
<td>$104,010</td>
</tr>
<tr>
<td>Computer programmers</td>
<td>$82,690</td>
<td>$44,140</td>
<td>$127,640</td>
</tr>
<tr>
<td>Web developers</td>
<td>$68,670</td>
<td>$33,790</td>
<td>$112,680</td>
</tr>
<tr>
<td>Computer and information research scientists</td>
<td>$113,190</td>
<td>$66,030</td>
<td>$165,600</td>
</tr>
<tr>
<td>Computer network architects</td>
<td>$100,710</td>
<td>$55,160</td>
<td>$150,460</td>
</tr>
</tbody>
</table>

Advantages and disadvantages associated with employment on IT

First, some advantages of working in IT are:

- **Most, if not all, employers need technologists** There is always a need and demand.

- **Constant change** Makes the job more interesting.

- **Good wages** Depends on the IT firm, but well pay overall.

- **Growth and opportunity** Constant change in the field requires more personnel.
And as for the disadvantages of working in IT:

- **Long hours** Be prepared to work nights and weekends when needed.

- **Your personal time will be interrupted** An emergency call can occur at any given time.

- **Work tends to be deadline driven** And sometimes the amount of work is unreasonable.

- **Things don’t always work the way they’re supposed to** Expect the unexpected

Advice for the future students considering a career in IT

- **Certifications:**
  
  - Having some certification supplementing your degree is a great way to show employers that you have far more advanced skills. It also shows you to be more confident and proves that you can perform at a higher level.

- **Network:**
Networking is a great way to exchange your practice knowledge with people on the industry. You are able to learn about different business techniques, how the competitions is doing or about what's new and happening at the moment.

By networking, you build a reputation. People will start to notice you are knowledgeable, reliable and confident. You are going to be one of the first to be contacted when they need something. Having an up to date LinkedIn profile is a great way to stay close with coworkers without having to involve them in your personal life.

- Look for internships or entry level positions:

  - If you are asking yourself some questions like, “What experience do I have?”, “Are my skills useful in this career?” or “What are employers looking for?”, your best bet may be to look for an entry level job or an internship.
  - This is going to be a great opportunity to gain experience and knowledge while also learning new skills.
  - You may be sure of what position you want to get after you graduate, but everyone must start somewhere. The reality is that your first job is not going to be your dream job, but it will be a stepping stone to reach your career goals.

- Have a professional Resume:

  - Talk about your past job experiences. What types of challenges did you faced there? How did you overcome challenges? How did your work improve the organization's workflow? Provide a bulleted list of your projects, indicating the scope of your project, your approach to the project, obstacles faced, work performed and how did it benefited the company.
  - It's important to have an effective Technical Summary to shows your technical skills and make it easy for hiring manager to look at your information. Don't make it hard for them to find this information.
  - Hiring managers are looking for candidates who offer more than technical skills, they also want people with people and social skills.
○ If you want to get your foot on the door, consider offering free services to charities, friends, family or local businesses.

● Prepare for Interviews:

○ Who are the business competitors? What about the company's growth or success? Knowing this kind of information demonstrates to the interviewer that you are interested, like to research and care about the position.

○ If you are schedules for an interview, study the skills listed on your resume, and take time to read some examples for possible technical questions in their area of practice. Glassdoor is a great resource to check for some of the most common interview questions.

○ If for example, you list a programming language that you are not very experienced or are a little bit rusty, you may want to take the time to refresh up on your knowledge. Look at some YouTube videos or tutorials online.

Reference list


