

UNIVERSITY OF TECHNOLOGY, JAMAICA
Accredited by The University Council of Jamaica (UCJ)
School of Computing and Information Technology



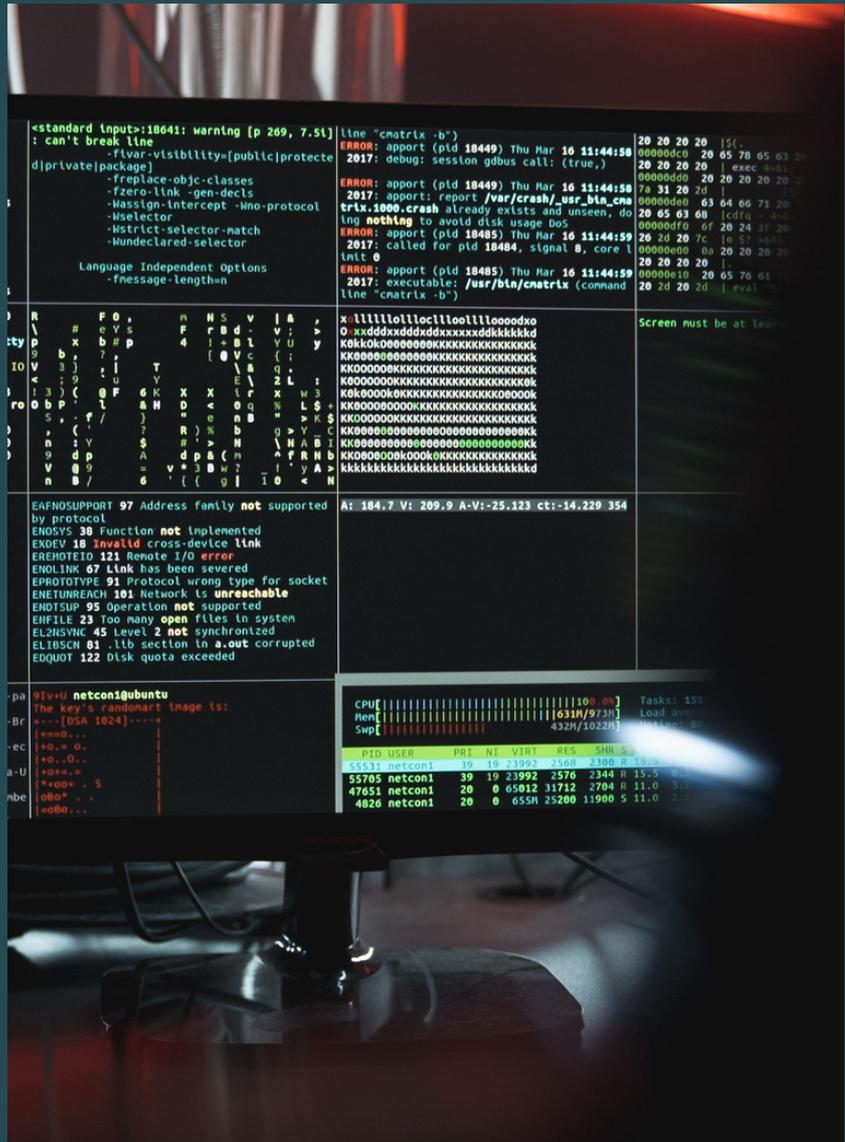
COMPUTER INFORMATION SYSTEM

Prospectus Booklet

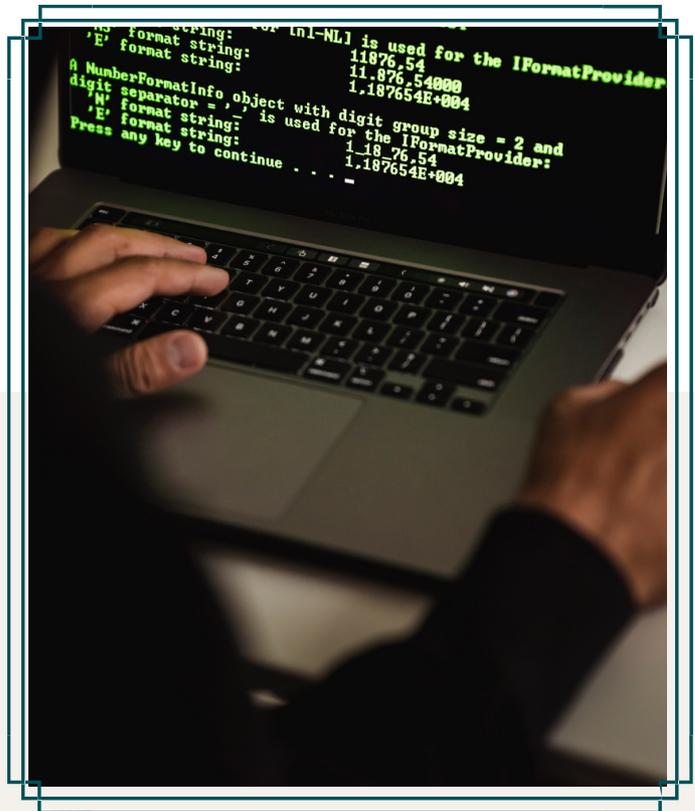
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UTech' Ja's MISSION AND VISION



Mission

To positively impact Jamaica and the wider Caribbean through high-quality learning opportunities, research and value-added solutions to government, industry and communities.

Vision

We are the #1 University in the Caribbean for work-ready leaders, committed to transforming students and society through high-quality teaching, research and value-added services.

WHAT MAKES US DIFFERENT?

University of Technology, Jamaica is an accredited institution that has the only undergraduate Computer Information System Degree with these specialisations in the Region

- Individual modules were created to aid students who desire to complete external certifications if they so desire
- Our modules were created with input from the industry to give the students insight to what they will be doing in the industry
- The degree is filled with practical exercises that encourage students to develop skills that they would use in the industry
- This degree also has a focus on developing the soft skills needed to communicate and manage professionally

PROGRAMME INFORMATION

Computer Information System

Overview

The four-year Bachelor of Science in Computer Information Systems (CIS) is designed to strike a balance between theory and practice, so that graduates will be equipped to design, create and effectively manage computer business solutions to drive innovation in Jamaica, the Caribbean and beyond. It will provide students with a strong grounding in computer information system, business, management, data analytics and entrepreneurship.

Career Options

- Data Analytics Practitioner
- Business Analyst
- Management trainee
- Web Site Practitioner
- Technology Entrepreneur
- Software Quality Assurance Practitioner
- Business Intelligence Practitioner
- Digital Marketing
- Technology Entrepreneur
- Information Systems Auditor

Prescribed Duration

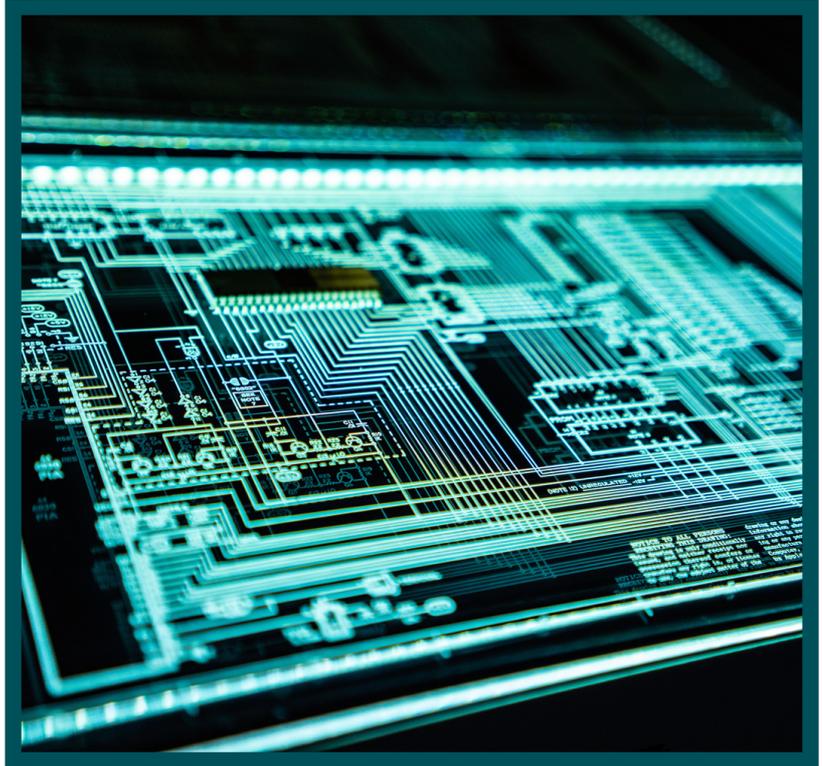
4 Years



MAJORS AND MINORS

Data Analytics

Data Analytics involves analyzing and processing raw data to uncover information that can aid in decision-making, product development, marketing, projection, forecasting etc.

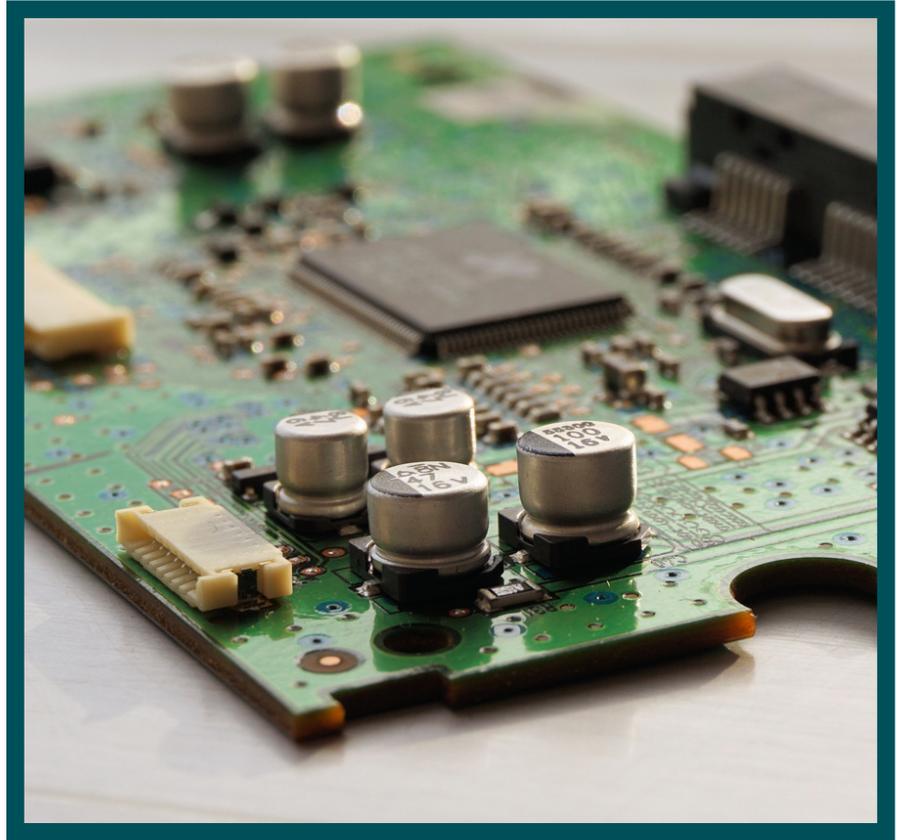


Technology

Entrepreneurship

Technology Entrepreneurship prepares students to proactively respond to technology opportunities in new business venture creation and inside existing organizations.

PROGRAMME INFORMATION



Student Outcomes

Our Programme was developed to achieve the following Student Learning Outcomes, by the end of the programme students should be able to:

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practise based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

Entry Requirements

Candidates are required to have a minimum of five (5) subjects in the CSEC General Examinations or the equivalent, inclusive of Mathematics and English Language at levels 1, 2, and 3 (from June 1998) or GCE Ordinary level passes at A, B or C.



Application Procedure

Applications can be made online by going to UTech' Ja's website at <https://www.utech.edu.jm>. After submission and confirmation, print or save a copy of the confirmation page. **Certified copies of the applicant's birth certificate, TRN and CSEC/GCE results along with the application confirmation page should be submitted to the Office of Admissions and Enrolment Management.**

Skills Required for a Job in Data Analytics?

SQL- Structured Query Language, or SQL, is a standard language used to manipulate, (ie. retrieve, add, delete, update etc.) data stored in database systems.

Spreadsheets- Knowledge and understanding of traditional, widespread spreadsheet tools are necessary

Critical Thinking- Knowing what data to collect and how to process it to glean the appropriate information is a critical thinking skill that's vital for data analysts to develop

Statistical Programming Languages and Tools- Some data analysts choose to use statistical programming languages and tools like R or Python SPSS, PSPP etc. to analyze large data sets.

Data Visualization- After gathering, analyzing and compiling the data, usually data analysts must share their findings with the company. Creating an easy-to-understand data analysis visualization is vital.

Public Speaking- Besides compiling the findings in a clear manner, data analysts must also explain both verbally and in writing why the data is important and what the company should do because of the findings.

Machine Learning- Some companies that use highly technical machines to complete tasks require their data analysts to have knowledge of how machine learning works.

Data Warehousing- Data warehousing is the process of creating storage and organization systems for a company's data.

Communication-Data analysts must communicate with a variety of stakeholders during the course of their work, including other data analysts, IT representatives and colleagues not directly related to data or technology.

Problem-Solving- Data analysts often encounter technical issues while completing their job-related duties. Establishing effective solutions for stakeholders through problem solving is a necessary skill.

CIS DATA ANALYTICS

Skills Required for a Job in Data Analytics?

Domain knowledge- Domain knowledge for data analysts refers to the domain in which the data they're assessing lives. Sometimes the data's domain can offer useful insights into the data and provide data analysts with helpful information with which they can more easily deconstruct and make sense of the data.

Project Management-Project management involves overseeing and tracking all elements of a project, including the team members and their work.

Data Prep-Data preparation, data preparation is the process of gathering, combining, cleaning, structuring and organising data sets in preparation for analysis and reporting.

Writing-While data analysts primarily work with numbers, creating written reports is an important part of their job responsibilities. Strong writing skills help data analysts clearly and accurately explain their findings in written reports.

Source: <https://www.indeed.com/career-advice/resumes-cover-letters/skills-for-data-analyst>

TECHNOLOGICAL ENTREPRENEUR

Skills Required for a Job in Technology Entrepreneurship?

Flexibility and Adaptability- An entrepreneur should be able to quickly adapt to almost any situation. Gone are the days of rigid and static systems as the world adapts to a more open and dynamic work-life situation as brought on by the recent pandemic

Technology Savvy- This flexibility has been made possible through recent advancements in technology and infrastructure. This is also opening new possibilities that were unreachable a few decades ago. As an entrepreneur, one should be savvy enough to navigate his or her way through this new era.

Analytical Thinking- An entrepreneur should be able to use the data available and make sound decisions. With the rise of Big Data, an entrepreneur should be able to expertly identify, analyze, and process information that is available.

Proactivity- An entrepreneur should be able to provide effective solutions to clients' problems long before they realize it's a problem. To be proactive also means to take the initiative in preparation for an imminent shift in the current landscape

Collaboration and Communication-

According to data collected by Harvard Business Review over the past two decades, the time spent by managers and employees in collaborative activities has ballooned by 50% or more, and at some companies that figure sits at around the 80% mark. Effective collaboration and communication make reaching goals quicker and smoother for everyone involved. Location independence in the future and being a good team player require effective communication.

Source: <https://insights.nexford.org/career-opportunities-in-entrepreneurship-are-growing>

CIS ENTREPRENEURS VIDEOS AND LINKS

A Collection of TED Talks (and more) on the topic of Entrepreneurship

<https://www.ted.com/topics/entrepreneur>

How Great Entrepreneurs See What Others Don't

<https://www.youtube.com/watch?v=68QW15sBdKQ>

How to Know If You're Meant to Be An Entrepreneur | Kiki Ayers | TEDxBuckhead

<https://www.youtube.com/watch?v=gFYBqZnFQ6w>

CIS DATA ANALYTICS VIDEOS AND LINKS

What Is Data Analytics? - An Introduction

<https://www.youtube.com/watch?v=yZvFH7B6gKI>

Data Analytics for Beginners

<https://www.youtube.com/watch?v=mm2A5tKVIpg>

Beyond the Numbers: A Data Analyst Journey | Anna Leach | TEDxPSU

<https://www.youtube.com/watch?v=t2oOFs4WgI0>

Making data mean more through storytelling | Ben Wellington | TEDxBroadway

<https://www.youtube.com/watch?v=6xsvGYIxjok>

INFORMATION SYSTEMS AUDITOR

An information systems auditor combines the analytical skills of an auditor with the technology expertise of an information technology, or IT, professional. ... IT auditors with sufficient experience and training can obtain a certification and must also stay current on the latest technology.

TASKS & CHALLENGES

- **DIGITAL TRANSFORMATION**
- **TRANSLATE COMPLEX PROCESSES DURING DEVELOPMENT**
- **DRIVE CHANGE MANAGEMENT**



PAY RANGE

In the US the average yearly salary ranges from \$49,000 (USD) to **\$97,000 (USD)**

In Jamaica, the average yearly salary ranges from **\$901k (JMD)** to **\$ 6m(JMD)**

Last updated May 13, 2022

RESPONSIBILITIES

- Assessing the risks and controls that are associated with the IS assets of a business entity
- Identifying the specific weaknesses of an IS system's network
- Creating and developing internal audit reports for the management team and the C-levels executives of a business or a corporation
- Maintaining thorough and complete IS audit documentation sets
- Creating a set of best standards that can be used to conduct risk assessment studies
- Making sure that previous resolutions to previous IT audit issues have been implemented



EDUCATION REQUIREMENTS



- Excellent documentation skills.
- Fundamental analytical and conceptual thinking skills.
- Experience creating detailed reports and giving presentations.
- Competency in Microsoft applications
- A track record of following through on commitments.
- Excellent planning, organizational, and time management skills.
- Experience leading and developing top-performing teams.

DATA ANALYTICS PRACTITIONER

The Data Analytics Practitioner, in service of an organization and/or stakeholders, supports the data life cycle by collecting, transforming, and analyzing data, and communicating results in order to inform and guide decision-making.

TASKS & CHALLENGES



- Making Sense of Unused Business Data
- Minimize Misleading Revenue Models and Forecast
- Highlight Micro Mistakes
- Diminish Challenges in Customer Service



PAY RANGE

The average yearly base salary ranges from \$31K (USD) to \$144K (USD)

The average yearly base salary ranges from (JMD) 960k to (JMD) 4M

Last updated May 13, 2022



RESPONSIBILITIES

- Designing and maintaining data systems and databases; this includes fixing coding errors and other data-related problems.
- Mining data from primary and secondary sources, then reorganizing said data in a format that can be easily read by either human or machine.
- Using statistical tools to interpret data sets, paying particular attention to trends and patterns that could be valuable for diagnostic and predictive analytics efforts.

Demonstrating the significance of their work in the context of local, national, and global trends that impact both their organization and industry.



EDUCATION REQUIREMENTS

- Proven working experience as a Data Analyst or Business Data Analyst
- Technical expertise regarding data models, database design development, data mining and segmentation techniques
- Strong knowledge of and experience with reporting packages (Business Objects etc), databases (SQL etc), programming (XML, Javascript, or ETL frameworks)
- Knowledge of statistics and experience using statistical packages for analyzing datasets (Excel, SPSS, SAS etc)
- Strong analytical skills with the ability to collect, organize, analyze, and disseminate significant amounts of information with attention to detail and accuracy
- Adept at queries, report writing and presenting findings

TECHNOLOGY ENTREPRENEUR

A TECHNOLOGY ENTREPRENEUR IDENTIFIES HIGH-POTENTIAL, TECHNOLOGY-INTENSIVE BUSINESS OPPORTUNITIES, GATHERS NEEDED RESOURCES SUCH AS TALENT AND CASH, AND MANAGES RAPID GROWTH USING REAL-TIME DECISION-MAKING SKILLS."



TASKS & CHALLENGES

Need for Smarter Technological Solutions

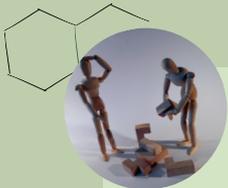


PAY RANGE

The Average Yearly Base Salary ranges from (USD) \$73K to (USD)\$158K

The Average Yearly Base Salary ranges from (JMD) 90K to (JMD) 327K

Last updated May 13, 2022



RESPONSIBILITIES

- Seek new directions and ways to improve and grow the company
- Responsible for the final decision on strategic and sometimes operational matters
- Oversee financial records and take action such as securing a new line of credit to handle unforeseen events
- Set the direction and establish the desired image for the business
- Responsible for the overall marketing plan for the business
- Manage the company's incoming calls, emails, visitors, and inquiries. Also, make outbound calls; respond to emails and reschedule appointments as needed
- Attend to clients and ensure customer satisfaction. May introduce adjustments to products and services
- Carry out the HR function for the business
- Perform all other duties necessary for the organization to achieve its goals.

CAREERS

BUSINESS ANALYST

Business Analyst helps guide businesses to improve processes, products, services and software through data analysis. These agile workers straddle the line between IT and the business to help bridge the gap and improve efficiency.



Tasks & Challenges

DIGITAL TRANSFORMATION

TRANSLATE COMPLEX PROCESSES DURING DEVELOPMENT

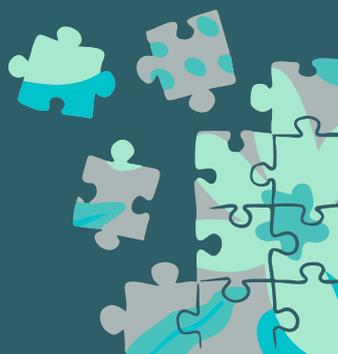
DRIVE CHANGE MANAGEMENT

PAY RANGE

In the US the average yearly salary ranges from \$51k (USD) to \$98k (USD)

In Jamaica, the average yearly salary ranges from \$2,316,141 (JMD) to \$4,089,280 (JMD)

Last updated May 13, 2022



RESPONSIBILITY

- Creating a detailed business analysis, outlining problems, opportunities and solutions for a business
- Budgeting and forecasting
- Planning and monitoring
- Variance analysis
- Pricing
- Reporting
- Defining business requirements and reporting them back to stakeholders

EDUCATION REQUIREMENTS

- Excellent documentation skills.
- Fundamental analytical and conceptual thinking skills.
- Experience creating detailed reports and giving presentations.
- Competency in Microsoft applications
- A track record of following through on commitments.
- Excellent planning, organizational, and time management skills.
- Experience leading and developing top-performing teams.



Reference Sources

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<https://resources.infosecinstitute.com/topic/information-security-is-auditor-salary-and-job-prospects/>

<https://www.cio.com/article/2436638/project-management-what-do-business-analysts-actually-do-for-software-implementation-projects.html>

<http://oceansofdata.org/what-does-databig-data-practitioner-need-know-and-be-able-do#:~:text=This%20definition%20describes%20the%20crosscutting%20skills%20needed%20by,res ults%20in%20order%20to%20inform%20and%20guide%20decision>

Solve Common Business Problem with Analytics Solutions (clariontech.com)

<https://www.glassdoor.com/Salaries/data-practitioner-salary>

Data Analyst Salary in Jamaica | PayScale

What Does a Data Analyst Do: Responsibilities, Skills, and Salary (northeastern.edu)

Data Analyst job description template | Workable

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let's get in touch

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