



12:10pm – 12:30pm

An Invitation to IT and Computer Science

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22 May 2021

Last edited: 22 May 2021

Slide count: 16

Our Current Changing Society 1/2



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U605 Network...
ZAR 499.00



Our Current Changing Society 2/2

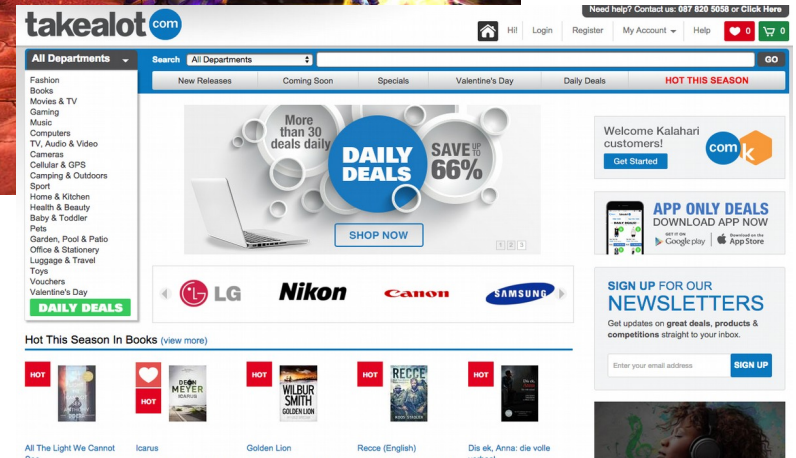


Google

Google Search

I'm Feeling Lucky

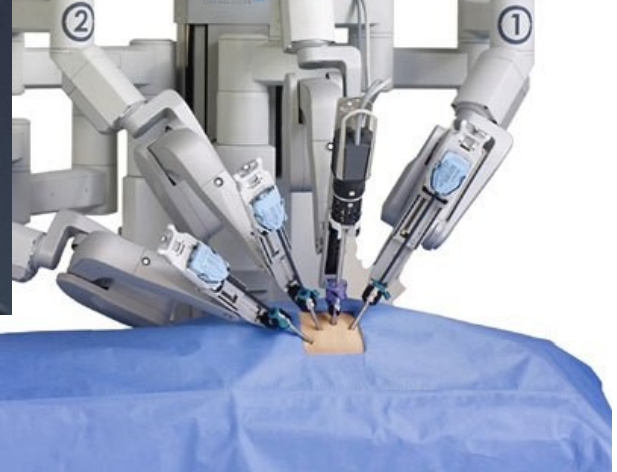
Google offered in: Afrikaans Sesotho isiZulu isiXhosa Setswana Northern Sotho



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IT in a Future World



Why Study IT?

- ❑ Change the world!
- ❑ Be happy.
- ❑ Be excited.
- ❑ Stability/Job security.
- ❑ Lots of growth opportunities.
- ❑ Make money.
- ❑ Get famous.
- ❑ Study further or teach.
- ❑ Complement something else.
 - Something for fun;
something for a career.

THE BEST JOBS IN THE U.S. FOR 2020

RANK	JOB TITLE	MEDIAN BASE SALARY	JOB OPENINGS
1.	Front End Engineer	\$105,240	13,122
2.	Java Developer	\$83,589	16,136
3.	Data Scientist	\$107,801	6,542
4.	Product Manager	\$117,713	12,173
5.	Devops Engineer	\$107,310	6,603
6.	Data Engineer	\$102,472	6,941
7.	Software Engineer	\$105,563	50,438
8.	Speech Language Pathologist	\$71,867	29,167
9.	Strategy Manager	\$133,067	3,515
10.	Business Development Manager	\$78,480	6,560
11.	Nursing Manager	\$85,389	12,320
12.	HR Manager	\$83,190	3,966
13.	Operations Manager	\$70,189	19,198
14.	Salesforce Developer	\$81,175	3,639
15.	Finance Manager	\$120,644	4,091
16.	Accounting Manager	\$85,794	3,589
17.	Program Manager	\$87,005	19,280
18.	Applications Engineer	\$76,854	9,550
19.	Clinic Manager	\$70,000	5,768
20.	Physical Therapist	\$71,483	28,886

SOURCE: GLASSDOOR
THE LIST IS BASED ON THREE FACTORS: MEDIAN BASE REPORTED SALARY,
NUMBER OF JOB OPENINGS AND OVERALL JOB SATISFACTION RATING
(ON A SCALE OF 1.0= BAD JOB TO 5.0= BEST JOB) OVER THE PAST YEAR.

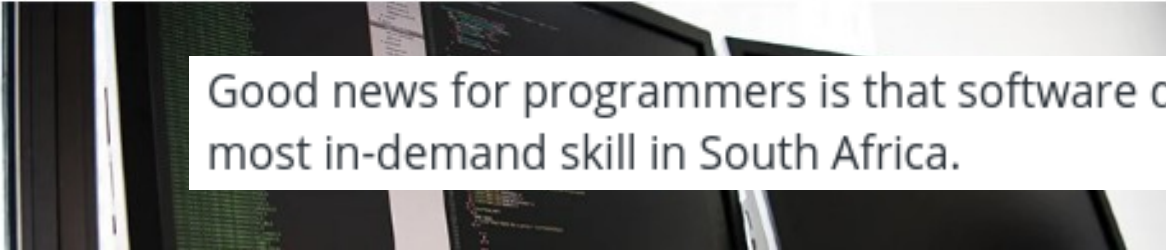
yahoo!
finance



What about jobs in South Africa?

Software developer salaries in South Africa in 2021

Staff Writer 18 May 2021



Good news for programmers is that software development remains the most in-demand skill in South Africa.

Intermediate Software Development Salaries (CTC)		
Region	From	To
Gauteng	R48,442	R65,604
Western Cape	R45,012	R56,685
KwaZulu-Natal	R42,755	R55,882

<https://mybroadband.co.za/news/business/397239-software-developer-salaries-in-south-africa-in-2021.html>



What does an IT graduate do?

- ❑ Not just sitting in a dark room by a terminal
- ❑ Learn by doing
- ❑ Variety
- ❑ Helping people
- ❑ Entrepreneurial
- ❑ No single career/degree



5 Branches of IT

- ❑ Computer Science
 - Foundations and principles (software/algorithms)
- ❑ Information Systems
 - Business processes and information-centric applications
- ❑ Software Engineering
 - Software development processes
- ❑ Information Technology
 - Applications of hardware and software
- ❑ Computer Engineering
 - Hardware and communications



IT @ UCT

□ School of IT

- Department of Computer Science
 - BSc/BBusSci/BA degrees in Computer Science
- Department of Information Systems
 - BCom/BBusSci/BA degrees in Information Systems

□ Other departments

- Department of Electrical Engineering (Engineering Faculty)
 - BSc (Eng) in ElecEng or Computer Engineering



What is Computer Science?

- ❑ Computer Science (CS) is the study of:
 - Computer software
 - Algorithms, abstractions and efficiency
 - Theoretical foundation for computation
- ❑ What you learn in a Computer Science degree:
 - Principles of computation
 - How to make machines perform complex tasks
 - How to program a computer
 - What current technology exists and how to use it
 - Problem solving



Computer Science @UCT topics

□ First year

- Problem solving and programming in Python
- Object-oriented design in Java

□ Second year

- Data structures, databases, human-computer interaction, parallel computing, computer architecture, software engineering

□ Third year

- Operating systems, networks, algorithms, advanced software engineering, (C++, machine learning)

□ Honours

- Compilers, functional programming, research and innovation, AI, HCI, big data, games/graphics, network security, ...



Why Study CS @ UCT

- ❑ Degree accredited by British Computer Society (international curriculum).
- ❑ CS department ranked highest in country.
- ❑ Innovative teaching (research-led, constant curriculum revisions, etc.).
- ❑ Diverse staff interests.
- ❑ Enthusiastic staff and students!



So what degrees are Computer Science?

- ❑ BSc with a major in Computer Science
- ❑ BBusSci with a specialization in CS
- ❑ BCom with a specialization in IS+CS
- ❑ BA with a major in Computer Science



What do I need to get into CS?

- ❑ Meet points score for admissions.
- ❑ High school Mathematics!
 - 70% in NSC
- ❑ 60% in Physics or IT if you want a BSc
 - otherwise you can get a BBusSci, BCom (IS+CS) or BA (CS)
- ❑ Everything else we will teach you.
- ❑ No Matric IT needed!
 - Seriously, we can teach this stuff better :)



What should I apply for (CS or IS)?

Focus on algorithms and software	Combined focus on algorithms + business	Focus on business and information systems	CS + Science/Math	IS + Humanities	CS + Humanities
1 st : BSc(CS)	BBusSci(CS/IS) BCom(IS+CS) BSc(CS+IS)	1 st : BCom(IS)	BSc	BA Informatics	BSc / BA
2 nd : BBusSci(CS)		2 nd : BBusSci(IS)			



Thank you for listening!



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If you have questions:

*Attend the Science Q&A session
12.35-12.55*

*Chat with me online today (2.30pm-3.00pm):
<https://jitsi.cs.uct.ac.za/OpenDay2021>*

*Visit the School of IT website:
<http://www.sit.uct.ac.za/>*