Entry-Level Developer

MORE INFORMATION

22 Sonneblom Ave,
Strelitzia Park, Kariega
(Uitenhage)

062 066 0278

josuagouws@gmail.com

GitHub (Website)

LANGUAGES

AFRIKAANS (NATIVE)
ENGLISH (FLUENT)

JOSUA GOUWS

PROFILE

I was a full-time student at UNISA and completed my Bachelor of Science in Computing. I am a young adult from Port Elizabeth (Kariega) looking to work in the IT industry, more specifically Web- and software development. I am a hardworking person, that is always eager to learn new things and to improve. Being a front-end developer is something that I want to do now so that I can later advance into back-end to become a full stack developer.

EDUCATION

Secondary Education

Die Brandwag Hoërskool
2016 – 2020
Subjects :

- Afrikaans Home Language
- English First Additional Language
- Mathematics
- Life Orientation
- History
- Computer Application Technology
- Accounting

- Matric Certificate

Tertiary Education

UNISA (University of South Africa)
2021 – 2024

- Bachelor of Science in Computing

SKILLS

Throughout my life I've learned :

- ✓ HTML
- ✓ CSS
- ✓ C++
- ✓ SQL
- ✓ PC Building and troubleshooting
- ✓ Microsoft Word / Excel / Access
- ✓ Problem solving
- ✓ Quick Thinking

EXPERIENCE

Currently I have no work experience but I am constantly working on a website or creating something new/fun. What we've learned at UNISA is C++ as the main language with some SQL commands. I've done 1 project in javascript which I had to create a Solar system. Mostly we've build GUI applications using C++ in QTCreator. I've taught myself how to write in HTML and CSS. Which is why I'm currently learning Angular. Being able to do front-end and later on back-end. I will be able to become a full stack developer.

EXTRA

- Valid Driver License
- Hobbies are :
    - Chess
    - Strategy Games
    - Solving Puzzles
- In my free time I like to work on projects and do research to perform better in it.
- Achieved Provincial Colours for Chess in the Eastern Cape.

REPUBLIC OF SOUTH AFRICA

National Senior Certificate

Awarded to

JOSUA GOUWS

Identity number 0211285064088

Exam number 4203410070062

Subject	%	Achievement level
Afrikaans Home Language	69	5
English First Additional Language	73	6
Mathematics	52	4
Life Orientation	92	7
Accounting	55	4
Computer Applications Technology	74	6
History	64	5
**********	***	*

This candidate is awarded the National Senior Certificate and has met the minimum requirements for admission to bachelor's degree, diploma or higher certificate study as gazetted for admission to higher education, subject to the admission requirements of the higher education institution concerned.

With effect from December 2020

M. S. Lakometsi

Chief Executive Officer

This certificate is issued without alterations or erasure of any kind

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UMALUSI

Council for Quality Assurance in General and Further Education and Training South Africa

1528457

(See reverse for more information)

55304

UNISA university of south africa

Student number: 1353-723-7
Date: 2025-01-13

This is to certify that

JOSUA GOUWS

Identity Number :0211285064088
Date of Birth :2002-11-28

passed the university examinations in the undermentioned study units for which credit has been granted in partial completion of the

Bachelor of Science in Computing

NQF exit level: 7
Minimum credits required: 360

YEAR	MONTH	CODE		NAME OF STUDY UNIT	%	NQF LEVEL	CREDITS
2021	OCT	COS1501		Theoretical Computer Science I	50	5	12
2021	OCT	INF1505		Introduction to Business Information Systems	64	5	12
2021	OCT	INF1511		Visual Programming I	62	5	12
2021	OCT	INF1520		Human-Computer Interaction I	69	5	12
2023	FEB	COS1511	*	Introduction to Programming I	80	5	12
2022	OCT	COS1512		Introduction to Programming II	50	5	12
2022	OCT	COS2626		Computer Networks I	70	6	12
2022	OCT	COS2661		Formal Logic II	50	6	12
2022	OCT	ICT2621	*	Structured Systems Analysis and Design	75	6	12
2022	OCT	ICT2622		Object-Oriented Analysis	66	6	12
2022	OCT	INF2611		Visual Programming II	59	6	12
2022	OCT	STA1610		Introduction to Statistics	62	6	12
2023	OCT	COS1521	*	Computer Systems: Fundamental Concepts	78	5	12
2023	OCT	COS2601		Theoretical Computer Science II	63	6	12
2023	OCT	COS2611		Programming: Data Structures	63	6	12
2023	OCT	COS2614	*	Programming: Contemporary Concepts	84	6	12
2023	OCT	COS3761		Formal Logic III	72	7	12
2023	OCT	INF2603		Databases I	65	6	12
2023	OCT	INF3707		Database Design and Implementation	71	7	12
2023	OCT	INF3720	*	Human-Computer Interaction II	77	7	12
2023	OCT	MAT1503		Linear Algebra I	50	5	12
2024	OCT	COS2621	*	Computer Organisation	98	6	12
2024	OCT	COS3701		Theoretical Computer Science III	60	7	12
2024	OCT	COS3711		Advanced Programming	59	7	12
2024	OCT	COS3712	*	Computer Graphics	89	7	12
2024	OCT	COS3721	*	Operating Systems and Architecture	76	7	12
2024	OCT	COS3751		Techniques of Artificial Intelligence	66	7	12
2024	OCT	INF3703		Databases II	71	7	12
2024	OCT	INF3705	*	Advanced Systems Development	76	7	12
2024	OCT	INF3708	*	Software Project Management	87	7	12

* Passed with distinction

Total credits accumulated: 360

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Purpose statement of modules passed

This is to certify that the purpose statement of the modules offered comprises the following:

COS1501 - Theoretical Computer Science I

To introduce students to some concepts from Discrete Mathematics as a theoretical foundation for Computer Science. This background is relevant to relational databases, the development of provably correct programs, and the analysis of algorithms.

COS1511 - Introduction to Programming I

To provide students with an introduction to programming and to cover the fundamentals of control structures, problem-solving techniques, and the incremental testing of programs.

COS1512 - Introduction to Programming II

To introduce students to the detailed design and implementation of algorithms as programs, and includes the fundamentals of simple data structures with object-orientation.

COS1521 - Computer Systems: Fundamental Concepts

To introduce students to the computer as a system. This covers hardware concepts such as internal representation of numbers and characters and basic computer architecture, and software concepts such as systems software and applications software. It also includes a brief introduction to databases, and to systems analysis and design.

COS2601 - Theoretical Computer Science II

This module together with COS3701 will acquaint students with the capabilities and limitations of computers from a theoretical viewpoint. Module COS2601 covers formal languages, recursive definitions, regular expressions, finite automata, Moore and Mealy machines, transition graphs, the pumping lemma and decision problems.

COS2611 - Programming: Data Structures

To show learners how abstract data types and data structures can be implemented and used in an object-oriented programming language. The module covers recursion, linked lists, dynamic memory allocation, binary trees, and graphs.

COS2614 - Programming: Contemporary Concepts

This module provides qualifying learners with the knowledge, skills and competencies to apply object- oriented programming techniques and strategies in solving real-world problems according to industry- approved processes within South-African and global contexts. The students who complete this module can design and implement object oriented software systems. These abilities prepare qualifying students to be competent programmers that are familiar with structured programming techniques.

COS2621 - Computer Organisation

To introduce students to the underlying structure of a modern digital computer, including digital logic level, machine code level and the software system level. It involves programming in an assembly language.

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COS2626 - Computer Networks I

To introduce the fundamental building blocks that form a modern network, such as protocols, topologies and hardware. This module provides an in-depth coverage of the most important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, and security. Students will also acquire the skills to build a network from scratch and maintain, upgrade, and troubleshoot an existing network.

COS2661 - Formal Logic II

To introduce students to the syntax of propositional language and the truth functionality of first order logic, enabling them to deal with proofs for validity via deduction and resolution in an interpreted first-order language.

COS3701 - Theoretical Computer Science III

To enable students to understand the concept of computability. In the process they are introduced to context-free languages, recursively enumerable languages and the machines that accept them. It includes details of the Chomskyhierarchy, pushdown automata and Turing machines.

COS3711 - Advanced Programming

To increase the depth of student's insight into advanced programming principles and consolidate their competence there-in.

COS3712 - Computer Graphics

The purpose of this module is to equip students with knowledge of the fundamental principles andtechniques of modern Computer Graphics, and enable them to use these ideas, methods and tools towrite and implement graphics applications of medium complexity.

COS3721 - Operating Systems and Architecture

To acquaint students with general operating system functionality such as CPU scheduling, process coordination and concurrency, deadlocks, memory management, protection and security. It also covers the case of distributed systems.

COS3751 - Techniques of Artificial Intelligence

To equip students with a basic understanding of knowledge representation approaches (logic-based and alternative approaches), search techniques (exhaustive and heuristic), automated reasoning, and basic skills in logic programming.

COS3761 - Formal Logic III

To enable students to construct a number of different formal languages (such as opaque or transparent propositional languages, firstorder languages, sorted languages, modal languages and non-monotonic logics) and to solve problems of validity and truth for these languages.

ICT2621 - Structured Systems Analysis and Design

To enable an intermediate level systems analyst to analyse information systems, and design computerized solutions using structured analysis and design techniques.

ICT2622 - Object-Oriented Analysis

To enable an intermediate level systems analyst to analyse information systems according to the object oriented approach using the tools, techniques and methodologies of systems development.

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INF1505 - Introduction to Business Information Systems

Qualifying students can apply information technology (IT) concepts in their lives, identify different classes of business information systems, and understand systems development and information systems in business and the wider society. This module provides fundamental introductory knowledge, skills and values which will support further studies and applications in the sector of Information Technology and Computer Sciences and Commerce as part of either the BSc degree or BCom Informatics degree. This module will support further studies and applications in the sector of Computing.

INF1511 - Visual Programming I

Qualifying students as first-time programmers obtain introductory knowledge, skills, and competencies to apply visual programming concepts, techniques and strategies using problem solving, programming logic, as well as the design techniques of an object-oriented, event-driven language, Python. This module forms part of a B-degree and supports further studies and applications in the sector of Computing, in the fields of Computer Science, Information Systems or Multimedia. The qualifying student can programme computers to solve problems in business and society within African, South-African, and global contexts. Students require daily online connectivity and access and programmingability.

INF1520 - Human-Computer Interaction I

Students who complete this module successfully will have a fundamental-level overview of the principles and concepts of human-computer interaction (HCI). Students become cognisant with trends in the development of usercentred computer applications and in the types of interfaces and interaction styles. They gain an understanding of various attributes of the intended users that may influence computer use, such as their cognitive, perceptual, cultural and social characteristics. Students will be able to describe and compare different usability evaluation methods. They will be qualified to serve as novice members of a design team of interactive technological systems.

INF2603 - Databases I

Qualifying students can understand, design and manage database management systems. This module serves as a fundamental building block in equipping students with the knowledge and competencies to understand and use databases. This module provides fundamental and required knowledge, skills and values which will support further studies in the field of Database Management design and implementation systems on NQF level 7 as part of either Bachelor of Science degree in Computing or Informatics or the Bachelor of Commerce degree in Business Informatics or the Bachelor of Commerce degree with Informatics as major. These competencies contribute to the development of competitive information technology practitioners who have strong technical skills in designing, implementing and managing database systems. The module contributes to the development of the computing field in Southern Africa, Africa, or globally. Students are required to have computers and Internet access.

INF2611 - Visual Programming II

Qualifying students apply knowledge, skills and competencies in order to develop menu-driven, multiple layout- and database -applications in the visual programming paradigm, through the use of Python. The qualifying student is able to programme computers to solve problems in business and society within African, South-African and global contexts. Students require daily online connectivity and access and programming ability.

INF3703 - Databases II

The purpose of the module is to equip students with adequate knowledge and competencies to design, implement, and manage centralized and distributed database systems. Students registered for this module are introduced to the database development processes, database administration roles and responsibilities, stages of database design, database transactions, database performance tuning, distributed database concepts, database security, distributed databases within the cloud environment, decision support systems, and strategies for interacting with databases through the web. This module provides fundamental and required knowledge, which will support further studies and applications in the sector of Computer Science and Information systems, in the field of Database Management Systems as part of either Bachelor of Science degree in Computing or Informatics or the Bachelor of Commerce degree with Informatics as major. These competencies therefore contribute to the development of competitive Information Technology practitioners who have strong technical skills of designing, implementing and managing single and distributed database systems.

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INF3705 - Advanced Systems Development

Qualifying learners are required to be competent in the outcomes against the background of the requirements of qualifications in the disciplines thereof. Furthermore to demonstrate the knowledge, skills and competencies to apply Advanced System Analysis and Design concepts included within the field of Software Engineering. This module is intended for learners with some knowledge of System Analysis and Design, and to introduce the learner to concepts that can be used when developing high-quality systems. This module provides a glue between the other modules studies within the qualifications, where the module introduces the bests 'methods and techniques' to ensure that the systems that are built is well designed, on-time and costly.

INF3707 - Database Design and Implementation

Qualifying students to design, implement and use database management systems. This module provides fundamental and required knowledge, skills and values which will support further studies and applications in the sector of Computer Science and Information systems, in the field of Database Management systems as part of either Bachelor of Science degree in Computing or Informatics or the Bachelor of Commerce degree with Informatics as major. These competencies therefore contribute to the development of competitive information technology practitioners who have strong technical skills ofdesigning, implementing and managing database systems.

INF3708 - Software Project Management

The purpose of this module is to provide qualifying students with the necessary knowledge, skills and competencies to successfully initiate, evaluate, plan, manage and control real-world information technology projects according to industry-approved processes within African, South-African and global context. This module is intended for competent programmers and prospective managers. The student will be able to develop evaluation and planning skills and could extend this knowledge to manage, monitor and control an information technology project. Qualified students are able to express their logical evaluation and planning skills to society through the development of information technology projects in industry, conforming to specific standards and requirements. Students are required in addition to normal fees, purchase their own prescribed books and required software packages.as well as to have the following equipment at own cost:• a computer;• access to the Internet.

INF3720 - Human-Computer Interaction II

The purpose of the module is to provide students with a basic practical and theoretical introduction to human-computer interaction (HCI) and to HCI as a design discipline, extend their technical knowledge of dialogue styles, equip them with a basic set of analysis and evaluation techniques, familiarise them with current software tools for interactive system development, give students experience in the iterative nature of user interface development. Qualifying students can apply their practical skills and theoretical knowledge to design interactive computer-based products, from the requirements analysis stage through to creating a conceptual model of the system. They can evaluate existing interactive systems and prototypes using a variety of evaluation techniques. This module provides intermediate knowledge, skills and values, which will support further studies and design applications in the sector of Information Systems in the field of Information Technology, as part of the BSc or BCom qualification. These competencies therefore contribute to the development of communities with business support, design, evaluation and research skills.

MAT1503 - Linear Algebra I

This module will be useful to students interested in developing the basic skills in linear algebra which can be applied in the natural sciences and social sciences. Students credited with this module will have an understanding of the basic ideas of linear algebra and be able to apply the basic techniques for handling systems of linear equations, matrices, determinants and vectors as well as complex numbers.

STA1610 - Introduction to Statistics

To ensure that students are introduced to the most important basic statistical concepts. After completion students should have an informed understanding of different visual descriptions of data, including graphical and tabular techniques; measures of central location, dispersion and association. They should be able to use probability as a tool to create discrete and continuous probability distributions, used extensively in statistical inference; determine confidence intervals and perform hypothesis testing involving sample means and proportions; apply different forms of Chi-square testing; understand simple linear regression and correlation.