

JORDAAN JOHAN VAN DER MERWE

About

I am a confident & self driven individual well versed in C/C++/C# & embedded development. I have good leadership qualities that serve me well in team integration, organisation of operations and utilisation of resources. I am passionate about organisational systems that improve time efficiency and productivity. I am a big picture person. I am always motivated to comprehend where things fit into the vision of organisations in order to achieve end goals and to maximise output. I am a fast learner and I am also well versed in helping others to understand their tasks. I appreciate assisting others in order for them to perform better and more independently. I have respect for people from all different walks of life and I always try my best to accommodate them in ways that make their job easier and improves performance.

Personal Information

DATE OF BIRTH	28 November 1988
LANGUAGES	English & Afrikaans
EMAIL	jorvdmerwe@gmail.com
CELL	083 625 7493
DEPENDANTS	None

Short Bio

2003 - 2007	Matric 81%
2008 - 2011	BEng (Electrical & Electronic) with Final Year Project Distinctions
2012 - 2014	Graduate Electronic Engineer at Transnet Capital Projects, Bellville
2014 - 2015	MscEng Electronic
OCT 2015 - FEB 2017	Electronic Design Engineer & Department Head at iMAT
MCH 2017 - OCT 2017	C# Software Developer at Ocellics Software Solutions
NOV 2017 - MCH 2018	Electronic & Software Development Engineer at Syntell
MAY 2018 - PRESENT	C# Software Developer at pi-squared

Cape Town · South Africa ·

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Work Experience

PERIOD	May 2018 --- Present
EMPLOYER	pi-squared
JOB TITLE	C# Software Developer
Description:	ASP.Net C# development in the event registration arena. Involves the improvement, maintenance, refactoring and addition of ASP.Net Web Forms, C# library classes, service layer & data access layer code, SQL stored procedures. Further tasks include the design and implementation of an ASP.Net Core Web API and the manual interrogation and adaptation of bad data in SQL.
Skills:	ASP.Net, ASP.Net Core, C#, Web API, SQL Server, NHibernate, Entity Framework, SVN, Git, HTML, CSS, JavaScript, JQuery, Angular, Xamarin
PERIOD	November 2017 --- March 2018
EMPLOYER	Syntell
JOB TITLE	Electronic & Software Development Engineer
Description:	Software & hardware analysis and design with strong focus on C/C++/C# desktop, mobile and embedded development, Gemini agile project planning, source control, setting up git servers & repositories, migration from subversion to git, and git flow.
Skills:	C, C++, C#, Embedded real-time operating systems, Linux, Serial & Ethernet communications, Multi-threading, HTML, CSS, JavaScript, Winforms, C++ forms, Polymorphism, Generic frameworks, UML, SQL, Microsoft Visual Studio, Eclipse, Ticket Management, Setup of Gemini workflows & agile templates, Agile Methodology, Git & GitFlow, Product & Technical Support, Technical documentation
PERIOD	March 2017 --- October 2017
EMPLOYER	Ocellics Software Solutions
JOB TITLE	C# Software Developer
Description:	Development of software in a tightly knit agile team with strong focus on the .net framework.
Skills:	C, C# & VB.NET, ASP.NET Webforms, Winforms, ASP.NET MVC, Entity Framework, IoC Containers, Design Patterns, Polymorphism, Generics, Dependency Injection, CSS, HTML, JavaScript, SQL & TSQL, Microsoft SQL Server, Microsoft Visual Studio, DevExpress reporting, Ticket Management, Product & Technical Support, Git & GitFlow

PERIOD	October 2015 --- February 2017	
EMPLOYER	iMAT	iMAT Electronics & iMAT Manufacturing
JOB TITLE	Electronic Design Engineer & Department Head	

Description: Department Manager & Lead Electronic Design Engineer. Involves the design of electronic hardware, firmware & software for integration with mechanical systems.

Skills: *Embedded Electronic System Design* - Hardware Design, PCB Layouts, Firmware Design and Development, Programming in C, C++, C# & Python, Final Implementation and Integration, Prototype Testing, Version Control, Generation of Support Documentation as well as Production Planning & Manufacturing.

Microcontrollers skills - Experience with Microchip & Atmel, Programmable Code Protection, Watch Dog Timer, Power-on Reset, Communication Protocols such as SPI, I²C, CAN, UART, USART, USB & Ethernet, Analog including ADC, DAC, Analogue Comparator, Voltage Reference, CCP & ECCP, Timers, Digital IO, Data Signal Modulation, SR Latch.

Mechatronic Integration - DC, Stepper & BLDC Motor Control, Integration of Sensing Devices, Assisting with Mechanical Design.

Department Manager - Team Leader, Design and Technical Maintenance Support, Inventory Control, Procurement, Reporting, Financial Management & Budgeting.

Production - Analysis and improvement of a steel manufacturing facility production line in order to integrate a larger number of parts into a variety of end products efficiently and cost effectively through the optimisation of resource utilisation.

PERIOD	February 2012 --- February 2014	
EMPLOYER	Transnet	Transnet Capital Projects - Bellville
JOB TITLE	Electronic Engineer in Training	

Description: Electronic Engineer in Training in the field of Engineering Project Management, Engineering Management, Test & Commission, Large Relay Interlocking & Embedded Electronics.

Skills: Fail-safe Relay Interlocking Logic Design including Testing & Debugging, Embedded Electronic Design, Programming in C, PLC Programming, Analysis of Electronic System Integration, Test & Commission, Axle Counters, Train Occupancy Systems, CAD, Microstation, Industrial Standards, Project Management, Financial Management, Quality Control, Microsoft Office, MS Excel, MS Word, MS Project, LaTeX.

PERIOD	April 2012 --- August 2012	
EMPLOYER	Water Enrichment Treatment Solutions	Freelance Consulting
JOB TITLE	Electronic Engineer	

Description: Research & Development of a current controller for an electrolytic water purifying apparatus. Full design, development and construction of a 24 volt, 2-channel, 0 to 3 ampere, microprocessor based, level configurable, pulse width modulated current controller for an unidentified load including available interfaces for external sensors and circuitry.

Skills: Microprocessor Programming in C, Hardware Design, Sensor Integration, PCB Layouts.

PERIOD	June/July 2011	
EMPLOYER	Transnet	Transnet Capital Projects - Bellville
JOB TITLE	Electronic Engineering Student - Vacation Work	
POSITION	Team Lead	

Description: Design, Prototyping & Testing of a Temperature Dependant Airflow Controller.

Skills: Embedded C & Ladder Programming with Microchip PIC Microcontrollers, Block Diagram Programming with Siemens LOGO PLC, Integration of Analogue Sensors, Hardware Design, PCB Layout, Team Leadership.

PERIOD	June/July 2010	
EMPLOYER	Transnet	Transnet Capital Projects - Bellville
JOB TITLE	Electronic Engineering Student - Vacation Work	

Description: An Introduction to Transnet Capital Projects, Fail-safe Relay Interlocking & Large Company Structures.

Skills: Extensive study of the Spoorplan MK1C, relay based interlocking system, to establish sound knowledge of fail-safe operation of electronic systems. Understanding of the large company procedures.

Education

PERIOD	February 2014 --- October 2015	
DEGREE	Master of Engineering (Electronic)	
UNIVERSITY	The University of Stellenbosch	Stellenbosch, RSA

Topic: Mapping of 3D environments for a terrestrial vehicle.

Description: The integration of a sophisticated Infra-red Laser Smart Sensor (LiDAR), statistical mapping framework (OCTOMAP) and the KITTI dataset to generate occupancy grids for robot perception.

Skills: Linux, C++, Python, Embedded C Programming, Matlab, Ethernet Driver Design & Implementation, Socket Programming, Software Architecture Design, Data Capture and Handling, Software Framework Integration, Multi-threading

PERIOD	January 2008 --- December 2011
DEGREE	Bachelor of Engineering (BEng - Electrical and Electronic)
UNIVERSITY	The University of Stellenbosch Stellenbosch, RSA
Final Subjects:	Non-Linear Control Systems, High Frequency Techniques & Power Electronics.
Final Project:	Stabilisation of an Inverted Pendulum Two-wheeled Robot (Cum Laude)
Description:	This project concerned the design and stabilisation of an Inverted Pendulum Two-wheeled Robot including mechanical conception, mathematical modelling, motor selection, motor driver design, PCB design, integration of sensors(Accelerometer, Gyroscope & Rotary Encoders), software design and implementation of discrete estimation and control techniques on a Microchip PIC32 microprocessor.

PERIOD	February 2012 --- April 2012
CERTIFICATE	Computer Networks
INSTITUTION	Coursera
Description	This course introduces the fundamental problems of computer networking, from sending bits over wires to running distributed applications, and explores the design strategies used to solve computer networking problems.

PERIOD	January 2003 --- December 2007
CERTIFICATE	Matric 81 % avg
SUBJECTS	Science, Math, Biology, Accounting, English, Afrikaans.
INSTITUTION	Point High School Mosselbay, RSA

Skills

OFFICE SKILLS	MS Office • Project Management in MS Project or Similar • MS Excel or Similar • MS Outlook including utilisation of Shared Calendars, Task Lists & Advanced use of email Filters • MS Power Point or Similar
ENGINEERING MANAGEMENT SKILLS	Project Management • Budgeting • Ticket management, • Setup of Gemini workflows and templates • Agile methodology • Procurement • Resource Management • Team Lead • Inventory Control • Costing • Reporting
ELECTRONIC HARDWARE	DC, Brushless DC, Stepper & Servo Motor Drive & Control Circuit Design • Analysis and Reverse Engineering of Circuits • Extensive Transistor Circuit Analysis & Design • Switch-Mode Power Supply Design • Printed Circuit Board Layout, Production & Manufacturing • Large Relay Interlocking Analysis, Debugging & Design • Raspberry Pi
PROGRAMMING LANGUAGES	C • C++ • C# (Object Oriented, Inheritance, Overloading, Polymorphism, Abstraction, Encapsulation, Interfaces, Dependency Injection, Templates, Multi-threading & Boost libraries & Multi-threading) • Linux • Visual Basic • ASP.NET Webforms & Winforms • SQL & Transact-SQL • HTML • CSS • Javascript • Assembler • Python • Matlab • VHDL • Ladder for PLC Programming • LaTeX
MICROCONTROLLERS	Microchip & Atmel • Programmable Code Protection • Watch Dog Timer • Power-on Reset • Communication Protocols such as SPI, I ² C, CAN, UART, USART, USB & Ethernet • Analog including ADC, DAC, Analogue Comparator, Voltage Reference • CCP & ECCP • Timers • Digital IO • Data Signal Modulation • SR Latch
OPERATING SYSTEMS	DOS • Windows 1995 to Windows 10 • Linux UBUNTU with Terminal & Kernel Experience • Fedora • VirtualBox
OTHER	Assist with Design of Mechanical Systems • Assistance with Manufacturing Plant Production Planning and Data Collection

References

- SYNTELL Hein Nel
Senior Embedded Developer
078 663 6612
- OCELLICS Clinton Patterson
Lead Software Developer
082 975 6264
- IMAT MANUFACTURING Christo Kleinhans
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079 377 9929
- TRANSNET CAPITAL PROJECTS Rob Marinus
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