

Stefan Dominicus

Email: stefandominicus@gmail.com

Cell: 083 556 8553

Address: 5 Rutherglen Avenue, Newlands, Cape Town

South African ID: 9707245199089

Profile:

I am driven, calm under pressure, practical, and strive to always find the best solution to any problem. I am particularly interested in finding new and useful ways in which electronic technology can be incorporated into everyday situations to improve a product's performance and directly benefit the end-user. I am looking to create new and innovative systems, designed to seamlessly integrate useful technology into products and processes. My results have shown that I am focused, hardworking, and able to perform consistently, both under supervision and alone. This work ethic and skillset allow me to face any challenge head-on.

Education:

2016 – Present	University of Cape Town (BScEng Mechatronics)	4 th Year
2003 – 2015	Bishops Diocesan College (Bishops)	Matriculated 2015

Part-Time Employment:

2018 Dec – 2019 Jan	Aerobotics (Pty) Ltd	Data Ops – Stitching Intern
2017 – Present	Club Electron	Instructor
2016 – Present	SkillUp Tutors	Math, Science & IT

Skills Development:

My courses at UCT have exposed me to a range of engineering topics, including **control systems, automation, digital signal processing, machine learning, and embedded electronics**. My academic transcript contains a full list of courses taken. Additionally, my upcoming final year project will be based on the use of machine learning to predict sea ice structures in the Southern Ocean.

My problem solving and programming skills have been developed through studying Information Technology at high school, a variety of Computer Science and Engineering courses at UCT, and the experience I have gained through projects I have pursued on my own. My ability as a problem solver and programmer has been successfully demonstrated many times through a variety of projects in different languages (**Python, Java, C/C++, MATLAB, SQL, HTML**).

My interpersonal, organizational, and motivational skills have been crucial in a number of **leadership** roles which I have taken on both at school and at university. At university, I am currently captain of my league squash team. In my matric year, I was selected as **Head of House** (Mallett House, one of five day-boy houses). During this time, I was directly in charge of two other portfolios within the house, namely "Cultural: Singing and Eisteddfod" and "Matric Issues", as well as overseeing all other portfolios assigned to my fellow matrics in the house. I captained the Bishops Cycling team, and I was one of two senior students managing the Bishops Audio-Visual Society in 2015. These roles equipped me to work with large groups of people, keeping everyone motivated to achieve their best. A significant part of this experience was designing leadership structures and strategies, which were proved to be very successful after all major goals were achieved.

In 2012, and again in 2015, I was part of the production team responsible for two plays performed at the Edinburgh Fringe Festival (*Biloxi Blues*, and *Cold Stone Jug* respectively). The Edinburgh Fringe Festival is one of the most highly acclaimed drama and culture festivals in the world. Aside from being an exciting travel experience, these two trips taught me about working to a very tight schedule in an unfamiliar location, and about managing a team to overcome unforeseen setbacks.

In 2013, I was selected to take part in a two-month student exchange to Curicó, Chile. While in Chile, I stayed with a host family and attended Orchard College High School. I could speak barely any Spanish, so I joined some of the grade 3 and 4 classes, where I helped the younger kids improve their English.

I was recently part of a six-week internship at Aerobotics (Pty) Ltd, where I was very involved in **image processing** and worked to streamline the process of stitching hundreds of images into a single orthographic image for further processing.

I have spent the last two years working on a **CNC router** which I designed and built in my spare time. This project has allowed me to indulge my passion for building, as well as to further my understanding of a variety of **machining processes, electronics design practices, and CAD & CAM** workflows. The project is currently ongoing, but is able to mill aluminium reliably, which is in line with my original goals for the project.

Stefan Dominicus

stefandominicus@gmail.com

Awards & Achievements:

Dean's Merit List (2018) – UCT
Dean's Merit List (2017) – UCT
Golden Key International Honor Society Member (invited in 2017) - UCT
Dean's Merit List (2016) - UCT
Class Medal (Introduction to Electronic Engineering – 2016) - UCT
Computer Science Merit Award (CSC1015F - 2016) – UCT
UCT Faculty Entrance Scholarship (2016)
Matriculated from Bishops with 7 Distinctions (2015)
Bishops Music Scholarship (2011 - 2015)
Full Colours (Leadership, Academic, Music, Drama, Cycling) - Bishops

Community Growth:

I began working with SkillUp as a private tutor in 2016, which has allowed me to share my love of math and science with others. What began as a way to earn a little pocket money has become a passion for empowering struggling students to achieve the results they know they are capable of. I have worked with students in high school and at university, from all over the Southern Suburbs. I tend to work most on math and physics, and I love seeing my students grapple with and grasp the content which they previously found confusing. I particularly enjoy building lasting relationships with my students, where I can be a part of their progress towards achieving the results they desire.

At school, I often tinkered with electronics in my spare time, which was a huge help in preparing me for engineering at UCT. I started working with Club Electron in 2017 because I believe that more kids need to be exposed to electronics and coding at a young age to hopefully inspire them to pursue hobbies or careers in STEM fields. The program is run as an extra-curricular activity at schools all over Cape Town, aimed at grades 4-7. I have worked as an instructor at a number of schools, taking the kids through the topics and helping them understand, build, and test their creations.

Hobbies & Interests:

Since 2012, I have been working as a DJ for private functions and parties. My music and playing style allows me to entertain people from 13th birthday parties, 21st, 40th, 50th, wedding celebrations, as well as promotional events and corporate functions. I enjoy getting to work with the client to bring life into each party. Every event is different, and each client presents their own challenges, which makes each one unique and exciting.

I am very interested in low-cost electronics and remote-control systems. I have self-taught experience with various **Arduino** platforms, and my courses at UCT have allowed me to work with more advanced platforms (an **STM32F0**-based development platform, and a **Raspberry Pi 3**). During my matric year (2015) I designed and built a **quadcopter** based on an Arduino platform. I particularly enjoyed writing a controller application which ran on my laptop and sent commands to the quadcopter, which allowed me to experiment with a wide range of user input devices.

Some of my other areas of interests include:

Playing squash: I am part of the UCT Squash Society, where I enjoy playing both league and social matches, as well as meeting new people. This year I am also **captain of my league team**.

Motorbikes: I love riding motorbikes, as well as working on them. I am in the process of growing my home workshop's capabilities which will present a range of servicing and modification possibilities. I hope that I will one day be able to take on a kit-car project like an AC Cobra.

Wine Tasting: I was a member of UCT's Wine & Culture Society from 2016 to 2018. In 2017 I took part in a Cape Wine Ambassador's course, conducted by SA wine-legend, Clive Torr.

References:

Name	<i>John Ryall</i>	<i>Jan-Dirk Brak</i>
Company	<i>Southey Contracting</i>	<i>Aerobotics</i>
Relationship	<i>Family Friend & Mentor</i>	<i>Manager: Strategic Projects and Initiatives</i>
Contact details	<i>jryall@southey.co.za</i>	<i>jandirk@aerobotics.com</i>