Nicholas Krause

Address: 2 Ross Street, Roslyn
Dunedin 9010
Email: nicholask.12210@gmail.com
Mobile: (+64) 021 145 7773
Website: nicholaslkrause.com

CAREER OBJECTIVE

Aspirational, Motivated, technology driven individual with interpersonal and management skills. Enjoys programming, electronics, critical thinking and applied mathematical analysis. Seeking employment opportunities in a wide variety of areas in the electronics and/or software industry.

EDUCATION

2016-2020

University of Canterbury
Bachelor of Engineering, with *First Class Honours* in *Mechatronics Engineering*.
Cumulative GPA: 8.3 out of 9 (Equivalent to US 4.0).

2011 - 2015

Otago Boy's High School
Secondary school education — *NCEA Levels 1, 2, and 3 endorsed with Excellence*

AWARDS

University Scholarships and Awards
NCEA Scholarship Award (2015-2017)
Engineering and Forestry Faculty Scholarship (2016)
Energy Education Trust New Zealand Scholarship (2017)
Robocup Competition winner (2018)
Solar Car Challenge winner, Richard Duke Trophy (2018)
Final Year R&D Projects, Best Graphical Communications (2019)
JR Templin Bursary Scholarship (2019)
Beca Engineering in Society Scholarship, 3rd Pro (2019)

Secondary School Scholarships and Awards
Roslyn Physiotherapy Health Sciences Scholarship (2015)
NCEA Scholarships in Biology, Chemistry and Earth and Space Science (2015)
Subject Distinctions: *Calculus (2nd, 2015), Economics (1st, 2014), English (2nd, 2014), History (1st, 2013), Economics (1st, 2013), Science (2nd, 2013).*
Junior Dux (2012)

RELEVANT EXPERIENCE

Feb 2020 – Jun 2020

Scott Technology, Dunedin HQ
Graduate Controls Engineer

- My role at Scott involved learning and developing skills that are fundamental to a controls engineer. During my time there I mainly focussed on drafting up electrical schematics and wiring up electrical cabinets. I was taught by the Controls and Vision team leader there, who is an experienced electrician and engineer. The software I used for the CAD of electrical schematics was Eplan.

Nov 2019 – Feb 2020

Trimble Inc., Christchurch R&D Office
Application Specialist and Software Development Intern

- The internship at Trimble centred around an R&D idea of using Bluetooth LE beacons to track dump truck loading. This project incorporated Bluetooth LE beacons and everyday smartphones through an Android app that I programmed in Java, as well as the basis of a back-end receiver HTTP server to accept and display the information gathered by the beacons. This took place over 3 months, and with the aid of experienced software developers at Trimble.

Nov 2018 – Feb 2019

University of Canterbury, Christchurch
Assistant Electrical and Mechanical Technician

- Under the guidance of an experienced Technician I worked at the University performing electronics work, and machine work for the duration of my summer employment. My main overarching project that I was assigned was automating the doors of rat mazes in the psychology department so that they could be done using a control panel. I wrote the software and built the control panels and assembled the mechanical and electrical upgrades to the mazes.

Apr 2018 – May 2018

TE Connectivity Ltd., Christchurch

Junior Design Engineer

- I worked at TE Connectivity as an intern and I worked on CAD designs and basic mechanical construction for their manufacturing department. (SolidWorks)

GENERAL EXPERIENCE

University of Canterbury, Christchurch

Teaching Assistant

Feb 2019 – Nov 2019

- EMTH118, ENMT201, ENMT301, and ENME313 – I have previously acted as a teaching assistant (TA) for several courses over my time studying. As a TA, I supervise labs and help students in the course with their understanding of the content and any issues they encounter. Two of these courses are engineering design courses, thus I also help to establish a creative atmosphere such that they can think of abstract solutions to their problems. This is one of the main cornerstones of engineering.

Feb 2017 – Feb 2019

UC Robotics, University of Canterbury Club

Marketing Manager

- I operated as the committee member in charge of management of the social media outlets for the club, e.g. Facebook page, and any merchandise or advertising affiliated with the club.

Feb 2017 – Nov 2017

Bishop Julius Hall, Christchurch

Residential Assistant*(RA)*

- In my role, I was in charge of two floors of residents (20 students). I was their point of contact for help with academic studies or mental wellbeing. In preparation for this position I completed a PFA (Psychological first aid course). This position helped me to grow personally, as I had to be able to function as an authority figure (personally having to enforce hall rules, like drinking and being too loud) to people at the hall, as well as a person who was approachable regarding problems. As part of my portfolio I was in charge of 'Communications' for the Hall. This meant I took photos for events, edited them, and posted them to the public Facebook page to publicize the hall. I also compiled the magazine (2017) for the hall using InDesign and produced various event/floor pages to go into it.

RELEVANT AND TRANSFERABLE SKILLS

Circuit design software experience (Altium, TINA) - Used Altium to develop a 4-layer PCB from scratch, 400-level design course. Additional experience using TINA to design circuit boards.

Microsoft Office Experience - Word, Excel and PowerPoint, six(6+) years independent experience.

Team leading - Frequent experience as leader in group assignments, which involves designating roles and responsibilities among the whole group evenly (including myself).

Management – I was an RA for a year during my study, capable of responsible floor supervision and management. I was also the Marketing manager for a volunteering club on campus (UC Robotics) for 2 years.

Mechanical machining (Lathe, and Mill) - Mechanical workshop training using machining tools including a lathe and mill, etc. Designed and constructed a tap-wrench. Worked as an assistant mechanical technician, frequently using heavy machinery.

Electrical circuit soldering and populating experience – Completed an electrical workshop course for electronics and circuitry. Worked as an assistant electrical technician, performing a lot of circuitry soldering and modification. Also honed these skills in these courses: ENMT201, ENMT301, ENCE464, ENMT401.

PROGRAMMING

VDHL Programming - Completed 300-level course on digital devices and electronics which focused on FPGA coding in VHDL, also covered hardware implementations of logic circuits. (Received an A+ for the course)

C/C++ coding – Completed a 200-level course on programming in C, where I programmed an Atmega32 Microcontroller to simulate a game, which worked on a 5x7 LED matrix. Completed a 300-level course on computer architecture which involved coding a PID control system for a model helicopter (Used a TIVA circuit board). 300 Level Design course, programming a robot in C++. TA for a design course, with C/C++ programming and Arduino. Currently taking a 400-Level course in C/C++ programming of a microcontroller.

MatLab coding - I have completed a 100-level course in this with an A grade. Have carried out additional coding assignments and labs relating to applications of the mathematics e.g. (Newton-Raphson method, etc.). Completed a 200-Level course on Linear algebra and statistics, which involved weekly quizzes and an assignment analysed in MatLab.

PLC coding – programs from Ladder Logic to program PLCs. Programmed a model elevator, with a working scheduler for prioritizing which requests to service. TA for a PLC coding course.

Python coding – Completed a 100-level course in this, received an A+. Additionally took a 400-Level course in python programming for Computer Vision, and received an A+.

Java programming – Internship project developing an Android Application for detecting and tracking Bluetooth LE beacons, coded in Java, and some C#.

FURTHER TRAINING

2015-2017, 2017-2019

Comprehensive First Aid Qualified - CPR and wound treatment, Course taken for RA role, and for my Engineering degree requirement.

2017

Basic fire-safety and fire extinguisher trained – Course taken for RA role, we act as fire wardens for the floors we look after.

2017

Basic Psychological first aid - Course taken for RA role, improved my interpersonal skills and ability to connect to people on a deeper level.

INTERESTS AND HOBBIES

- Arduino Kits – Interest in components and boards. I enjoy finding small projects to complete, e.g. I made an automatic light switch with an integrated IR remote.
- Sports - Tennis and Badminton– I played every week during high school, and still play occasionally if time permits. Basketball – I enjoy watching the NBA.
- Rubik's Cube – Solve Rubik's cubes at my desk when working
- Novels – Big fan of the Song of Ice and Fire series, and I enjoy science fiction and fantasy novels.
- Student Volunteer Army – I enjoy volunteering when I have free time, or sometimes even if I do not. I was a Volunteer leader last year due to my contributions to the club, and the community.

REFERENCES

Controls and Vision Team Leader, Scott Technology
Donald Liddell
(d.liddell@scott.co.nz)
Phone: +64 3 478 8422
Mobile Phone:
+64 27 433 4139

Portfolio Manager, CCSS, Trimble Inc.
Dmitry Golovachev
(dmitry_golovachev@trimble.com)
Mobile Phone: +64 224 324 034

Technician at University of Canterbury
Ben McGinlay
(benmcginlay@hotmail.com)
Mobile Phone: 027 780 8469