Vito **Kortbeek**

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Education

Delft University of Technology   *Delft, the Netherlands*
PhD Student   *Feb. 2019 - present*

Delft University of Technology   *Delft, the Netherlands*
Master Embedded Systems   *Sep. 2016 - Feb. 2019*

Delft University of Technology   *Delft, the Netherlands*
Bridging year HBO bachelor to Master Embedded Systems   *Sep. 2015 - July 2016*

Hogeschool van Amsterdam   *Amsterdam, the Netherlands*
HBO E-technology (Electrical Engineering)   *Sep. 2011 - July 2015*

Kennemer College Büllerlaan   *Beverwijk, the Netherlands*
HAVO, Profile N&T and N&G   *Sep. 2006 - July 2011*

Projects

Wireless Sensor System   *Noordwijk, the Netherlands*
Head Communications, ESA Business Incubation Centre - **Internship**   *Feb. 2015 - Sep. 2015*

This project was my graduation project for my HBO bachelor Electrical Engineering at the Hogeschool van Amsterdam.
- Redesigned hardware for GSM connectivity
- Redesigned hardware for GPS connectivity
- Designed hardware for Bluetooth connectivity
- Designed hardware for utilizing a Linux System on Module
- Designed a modular collection of programs for collecting and distributing sensor data from multiple sources to possibly multiple endpoints using ZeroMQ. Including server side software.
- Designed a Bluetooth Android app which reads QR codes and transfers this data to a embedded Linux system.

Wireless Sensor System   *Noordwijk, the Netherlands*
Head Communications, ESA Business Incubation Centre   *Sep. 2014 - Feb. 2015*

During this project I worked with two fellow students on creating a wireless sensor system using the BeagleBone Black.
- Designed software to enable wireless communication over the GSM network (3G).
- Designed software to collect GPS information.
- Designed software to transfer received sensor information to a server.

Brush-less DC motor driver   *Amsterdam, the Netherlands*
Hogeschool van Amsterdam   *Feb. 2014 - Aug. 2014*

For the Solar boat Challenge, I did research for building a 2kW Brush-less DC motor driver. I designed the hardware and developed the software for the driver.

Porting a SNMP stack to a DSP platform   *Landsmeer, the Netherlands*

Micro Elektronische Producten (MEP) - **Internship**   *Sep. 2013 - Feb. 2014*

During my internship at MEP I worked on porting a basic SNMP stack to their, in-house designed, DSP platform running a modified Texas Instruments RTOS. The DSP was a 16-bit system where bytes are also 16-bits.
- Porting the Simple Network Management Protocol (SNMP).
- Porting the MD5 algorithm.
- Porting the DES algorithm.
- Extending the excising SNMP solution with IPC features.
- Making the SNMP stack options dynamically configurable.

Shell Eco-marathon   *Amsterdam, the Netherlands*

Hogeschool van Amsterdam   *Sep. 2012 - Aug. 2013*

I worked with a team of fellow E-technology students on the electrical system of a prototype car that runs on hydrogen, named the H2A. My main tasks were as programmer for the micro-controller powered systems. These included:
- a graphical OLED display driver.
- a data-logger using flash chips and a micro-controller.
- a PC based logger for the hydrogen fuel cell.

Solar Boat Challenge   *Amsterdam, the Netherlands*

Hogeschool van Amsterdam   *Sep. 2012 - Aug. 2013*

During this project, I worked with the same E-technology students as with the Shell Eco-marathon project. Here we worked on the power-train and measurement systems of the solar powered boat. My main tasks consisted of designing:
- a GPS system (witch was also used in the H2A car).
- a small brush-less DC and normal DC motor driver.
- a small android and a web based application for displaying the current location of the solar boat.

Experience

Innoseis   *Amsterdam, the Netherlands*

Software developer (summer job)   *Jun. 2017 - Aug. 2017*

At Innoseis I mainly worked on implementing testing procedures within the embedded system, most notably a harmonic distortion test.

Micro Elektronische Producten (MEP)   *Landsmeer, the Netherlands*

Junior software developer   *Feb. 2014 - Sep. 2015*

At MEP I worked with a group of approximately 7 people on the software development for a Texas Instrument DSP with an RTOS used for a multitude of applications related to Voice over IP. The system was mostly used for maritime applications.
- Simple Network Management Protocol (SNMP) integration.
- Solving software bugs/issues.
- Implementing zero-copy messaging between tasks.
- Displaying logging information on the integrated web server.

Skills

Languages	Dutch, Native language; English, Average IELTS band 8 (C1 CEFR skill level)
Software	Vi/Vim, gcc, gdb, make, cmake, Atmel Studio, Eclipse, LTSpice, Eagle, Altium Designer, ModelSim, Quartus
Programming	C, Java, Python, C++, Bash, Matlab, Assembly, Lua, VHDL
Operating Systems	Windows; GNU/Linux (Arch, Ubuntu, Debian, Embedded Linux)

Hobbies

Hobbies	Software projects, Hardware projects, Gaming with friends