

# Dennis Potter

ELECTRICAL ENGINEER · COMPUTER SCIENTIST

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## Summary

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Currently working as engineering consultant for Aquantia Corp. Always curious about technological innovations and therefore graduated in electrical engineering & computer science. Strives for a complete understanding of computers, from the lowest level—i.e., the bare integrated circuits—to the highest—i.e., user space—, and is therefore always eager to learn something new. Enjoys writing small programs in his free time, either to automate everyday problems, or simply for the sake of fun, and gets excited by the seemingly endless possibilities of Linux. Loves a good read, also on non-tech subjects like economics, anthropology, or (geo)politics.

## Skills

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**Programming & Scripting** C, C++, Python, Rust, SystemC, (System)Verilog, Perl, Bash, MATLAB, PHP

**Markup languages** HTML5, CSS, LaTeX, Markdown

**Miscellaneous** Ethernet, Infiniband, Linux, SQL, Tkinter

**Languages** Dutch, German, English

## Education

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### RWTH Aachen University

M.SC. ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Oct. 2015 - Nov. 2018 // [Aachen \(D\)](#)

- *Specialization:* Micro- and Nanoelectronics
- *Final project:* “Implementation and Analysis of RDMA Communication in a Real-Time Co-Simulation Framework”—An analysis and subsequent implementation of the Virtual Interface Architecture Infiniband, using the OpenStack verbs, in order to achieve high throughput and minimal latency between nodes of the real-time co-simulation framework VILLASnode.
- *Modules included:* lectures on VLSI architectures, computer arithmetics, mixed analog signals, neural networks, new materials and devices in information technology, numerical device simulation, and operating systems. Lab training on VLSI design, FPGA programming in VHDL, and on the production of FeRAM cells.

B.SC. ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Oct. 2011 - Sept. 2015 // [Aachen \(D\)](#)

- *Final project:* “Analysis of Concepts for Power Reduction in Arithmetic Units of MAP Decoders”—A mathematical, bit accurate implementation of a decoder in MATLAB and C++, to find techniques that will potentially reduce the switching activity (and thus the power) in the arithmetic units of the decoder.

### Sophianum SG. in het Heuvelland

GYMNASIUM

Sept. 2005 - July. 2011 // [Gulpen \(NL\)](#)

- Comparable to a university-preparatory school with Latin as additional language.

## Work Experience

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### Aquantia Corp.

CONSULTANT

Aug. 2017 - Present // [Aachen \(D\)](#)

- Development of a layer 2 Ethernet switch in SystemC. The goal was to create a transmission line model to verify functionality, which could be easily translated into synthesizable code later, using a high-level synthesis suite.
- Support and further development of the FPGA user interface and the power analysis environment which was developed during the internship.

- Creation of an automated power analysis environment, build on top of Ansys' PowerArtist. Subsequently, power analysis and reduction on various digital designs was done.
- Development of an intuitive graphical user interface, written in Python, Tkinter, and C, to access and manipulate an FPGA Ethernet debug tool.

## Boscafé 't Hijgend Hert

WEB DEVELOPER AND SERVER ADMINISTRATOR

Apr. 2012 - Mar. 2018 // [Vijlen \(NL\)](#)

- Responsible for the online marketing, the development of several websites, and the maintenance and security of their Linux based virtual private server.

HEADWAITER

Sept. 2010 - July. 2016 // [Vijlen \(NL\)](#)

- Head of a small subteam of about 8 waiters. Responsible for a smooth running of daily restaurant business.

## Chair for Electrical Engineering and Computer Systems, RWTH Aachen University

STUDENT RESEARCH ASSISTANT

May. 2016 - July. 2016 // [Aachen \(D\)](#)

- Establishment of burst-mode communication between the FPGA fabric and CPU subsystem, over AXI and/or DDR interface on Altera Cyclone V devices.

## Extracurricular Activity

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### Nederlandse Wereldwijde Studenten (NWS)

BOARD MEMBER IT

Oct. 2016 - Sept. 2017 // [The Netherlands](#)

- *About NWS:* NWS forms a worldwide network of Dutch students currently, formerly and prospectively enrolled at foreign universities or professional schools. It offers a platform for joint activities and bridges the gap to the government, private sector, academic sector and society of the Netherlands. NWS currently has more than 5000 members.
- *Responsibilities:* Setting up the new online environment on a Ubuntu based virtual private server, including a new front end website, an online member management system, a new newsletter system and a Microsoft Office 365 email environment. The given requirements were a higher user-friendliness and improvements in terms of design and security.

### K.A.V. Alcuinus

BOARD MEMBER

Oct. 2012 - Oct. 2016 // [Aachen \(D\)](#)

- *About K.A.V. Alcuinus:* K.A.V. Alcuinus is the student association for all Dutch students at RWTH Aachen University and FH Aachen University of Applied Science.
- *Responsibilities:* Treasurer & President.
- *Studeren in Aken project:* This project was set up to promote RWTH Aachen University among Dutch students, recruit them, and support them during their enrollment at a German university. The project was initiated by K.A.V. Alcuinus in 2012, but is nowadays backed by RWTH Aachen University, the Dutch consulate in Aachen, and several government institutions in the Netherlands.