Léon van Velzen

Birthdate:	01/10/1997
Email:	-
Phone:	-
Github:	-
Website:	-
Nationality :	Dutch
Location:	Leiden

Personal profile

Known by friends as an avid traveler, a motivated student and a good companion.
The only thing coming close to my passion for travel is my love for understanding. At a young age this drive made me study the inner workings of computers. Always seeking a more difficult challenge, I commited to understand the universe, which meant becoming a physicist.

Work Experience

2020-2021, Amsterdam Scientific Instruments www.amscins.com

- Leading developer of a novel high throughput (6 Gb/s) Timepix3 data analysis pipeline as part of an internship (rewarded with a 9.0, written in in Python, Numba)
- Responsible for the architecture and implementation of the user interface used by customers to control the detectors which is now used at universities across the world

2015-2017, ChannelEngine www.channelengine.com

- Supported a startup to scale and increase revenue by refining the C# software architecture
- Greatly improved the efficiency of the import and export of product data that flows through the system daily
- Designed and implemented most of the new (version 2.0) API
- Integrated third party marketplaces like Bol.com, CDiscount and Ebay to our platform

Education

2020-Present, Master Applied Physics (track Physics for Instrumentation), TU Delft

- Average grade 8.2
- Currently writing a master thesis about aberration correction for Scanning Electron Microscopes (SEM). The innovative aberration corrector under study employs electrostatic mirrors to bring high fidelity SEM metrology to the next lithography nodes.

2017-2020, Physics Bachelor, Leiden University

- Graduated cum laude (average 9.0)
- Followed Advanced Theory Track (extracurricular problems sets)
- Bachelor thesis on the

  'Flow Confinement of a Laser Induced Atmospheric Helium Plasma'

rewarded with a 9.5.

2019, Exchange Program, University of British Columbia (Canada)

- Followed courses in engineering, mathematics and physics (average 8.8)
- Improved English speaking skills

2018, Circuits and Electronics (1, 2 & 3) edX online course, provided by MIT

2017-2018, Computer Science Propedeuse, Leiden University

- Cum laude (average 9.1)
- Completed alongside physics bachelor (see above)

2010 - 2016, Atheneum, Visser 't Hooft Lyceum Leiden

- Graduated magna cum laude (average 8.7)
- National mathematics (wiskunde B) final exam made without any errors

Skills

Spoken languages

- Dutch (native), English (fluent), Italian (proficient)

Programming languages

- High proficiency: Python (+Numpy,Numba), C
- Moderate proficiency: C#, Java, JavaScript (HTML,CSS), Lisp, Idris

Interests

Traveling

- During my gap year I cycled the length of New-Zealand in four months
- Member of a student travel society (AEGEE-Leiden)
- Spent five months in Vancouver (Canada) as an exchange student

Working out in the gym, and playing the guitar

Software Projects

Pyka Programming Language (work in progress) github.com/leon-vv/Pyka

- New programming language which improves and generalizes the structure of the popular Scheme and Common Lisp programming languages
- Novel concept of 'first class environments' used to elegantly combine dynamic and lexical scoping
- Written in Python and Pyka (a Lisp language)

To-do github.com/leon-vv/Todo

- Express a subset of the SQL database language in a dependent type system
- Illustrates how advanced proofs about database access can be verified at compile time
- Written in Idris