

Alex Goddijn

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Education

- 2008–2013 **International Baccalaureate**, *International School of Amsterdam*, Final score 38/45.
- 2012 **SAT**.
Subject scores: Chemistry - 650, Math 2 - 740, Physics - 690
SAT scores: Reading - 700, Math - 740, Writing - 620
- 2013–Present **Bachelor of Science**, *University of British Columbia*, Vancouver, *81.4% Average*.
1st year Science One (combined sciences) (79.4%)
2nd - 3rd year Engineering Physics (81.8%)
4th year Computer Science and Physics (87.4%)

Experience

Vocational

- 2017 **Software Engineer**, *Autonomos*, Berlin.
Worked as part of a team implementing a full stack autonomous driving solution. Did various research tasks, feasibility tests, and created visualization tools to improve work flow. Detailed achievements:
 - Learnt the ROS framework
 - Wrote visualization plugins for rViz
 - Researched the feasibility of integrating certain computer vision algorithms into the perception pipeline
 - Presented findings to various teams
- 2016-2017 **Tutor**, *Key Admissions*, Vancouver.
A part time tutoring job. Tutoring students from 2nd grade all the way to 12th grade in Maths, Physics, and Chemistry, both IB and BC curriculum
- 2014 **Software Engineer**, *Axiom Zen*, Vancouver.
Had a role helping a startup as a general software engineer. Loose structure meant taking on lots of high level responsibilities. Detailed achievements:
 - Front end design for website application using industry standard technologies (MEAN stack)
 - Setup of map servers
 - Integration of front end and back end (data flow)
 - Creation of automation tools (in Python)

- 2012–2013 **Software Engineer and product manager**, *TomTom*, Amsterdam.
 Assisted in the implementation of several algorithms, and helped initiate the design process for a new wearable fitness product.
 Detailed achievements:
- Implementation of clustering algorithm (k-means)
 - Design proposal of wearable fitness tracker
- 2011 **Customer service representative**, *TomTom*, Amsterdam.
 Helped customers with technical questions in a customer support call centre
- Miscellaneous**
- 2017 **Startup Weekend**, *UBC*, Vancouver.
 Created a minimum value product based on the idea of practicing for technical interviews through a peer to peer video chat platform. Created a NodeJs web application with working video chat and code editor over the weekend
- 2015 **Software Engineer**, *UBC Sailbot*, Vancouver.
 Helped in the design and implementation of a software system for an autonomous sailing vessel
- 2015 **General Engineer**, *UBC Engineering Physics Robot Competition*, Vancouver.
 Designed and built an autonomous robot designed to pick up and transport stuffed animals for a competition. Achieved 3rd place and received the highest grade for our product from an extremely competitive pool of 16 teams
- 2014 **NWHacks Hackathon**, *UBC*, Vancouver.
 Created an iOS application called ZenFlow, a geolocation based photo sharing app. Built the application myself from the ground up in Swift. The idea was to share photos and view them based on the location where they were taken
- 2010 **YouTube Java Tutorials**, *ISA*, Amsterdam.
 Created a series of introductory tutorials for learning Java, and very basic Java syntax. The videos have amassed 33,000 views and a lot of positive feedback

Languages

English	Fluent	<i>Native language</i>
Dutch	Fluent	<i>Native language</i>
French	Fluent	<i>Native language</i>

Computer skills

Languages	Java, Javascript / Typescript, C, C++, Assembly, Matlab, HTML, CSS
Software / frameworks	Matlab, NodeJs, Angular, git, ROS

- Skills
- Good understanding of low level computer architecture and memory management
 - Experience in writing assembly programs
 - Experience using valgrind and reference counting to find and fix dangling pointers and memory leaks
 - Experience with software engineering, working in scrum teams, and full stack software development
 - Good understanding of common data structures, including methods of analyzing time and memory complexity
 - Basic understanding of some machine learning algorithms, including linear and logistic regression, neural networks, and optimization algorithms
 - Good understanding of parallel computing, including methods of parallelization
 - Experience with writing thread safe code and identifying and fixing concurrency issues using various types of mutex's and locks
 - Good understanding of scientific computing, including number representation, optimization, techniques for solving linear algebra problems (pagerank for example), and compression techniques
 - Experience in algorithm design, and understand of memoization and dynamic programming
 - Experience in runtime analysis, and use of big O and big Θ notation

Engineering skills

Statics	Stress analysis, beam bending, deflection, deformation, buckling
Dynamics	Analysis of dynamic systems
Circuit analysis	Basic circuit analysis, including op amps, filters, H bridges
Thermo - dynamics	Did heat flow simulation using finite difference approximations
Practical skills	Soldering, waterjet, laser cutter, 3d printer, circuit debugging

Portfolio

Website	www.agoddijn.com	<i>Built from scratch using modern practices and technologies. Scalable and data driven</i>
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Interests

Skiing	Downhill and freestyle
Cycling	Road and enduro
Running	Medium distance
Waterpolo	Recreationally
Film	Watching and also creating small sports edits

- Literature Fiction and non-fiction, wide variety of genres
Some favourite books:
- Zen and the Art of Motorcycle Maintenance
 - Six Not So Easy Pieces
 - Surely You're Joking Mr Feynman
 - Norwegian Wood

Prizes

- Several prizes for excellence in Maths, Physics, and Chemistry during high school
- Several small scholarships at UBC of the amount of between \$500 and \$1000
- 3rd place in a mechatronics design competition at UBC

References

- Marc Kuo - Founder of Routific
- Andre Marziali - Head of Engineering Physics at UBC
- Patrick Stal - VP Marketing at TomTom Sports