**Tal Schwartz**

**3rd Year Engineering Physics**

[tal.schwartz@alumni.ubc.ca](mailto:tal.schwartz@alumni.ubc.ca) | (845)-282-0650

**Skills**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Programming**  -Java  -C  -SQL  -HTML  -Groovy  -MatLab | **Software**  -SolidWorks  -AutoCAD  -Solid Edge  - Microsoft Power Query  -LaTeX | **Electrical Skills**  -Circuit analysis  -Circuit construction  -Circuit design  -Circuit prototyping and soldering | **Mechanical Skills**  -Force and moment analysis  -Stress and strain analysis  -Various construction tools | **Laboratory Skills**  -Oscilloscope  -Data analysis  -Uncertainty analysis  -Lab component design/construction | **Languages**  -English  -French at intermediate university level  -Basic Hebrew |

**Technical Work Experience**

***Teaching Assistant, University of British Columbia,*** *September—December 2016*

* Responsible for grading, holding office hours, and exam invigilation
* Course: Principles of Software Construction (CPEN 221)
  + Design, implementation, and logic for software in Java

***Intern, Max Planck Institute for the Structure and Dynamics of Matter,*** *January—April 2016*

* Intern at the Max Planck research institute in Hamburg, Germany
* Designed and built a measurement system for full characterization of an infrared picosecond laser
* Designed multiple mechanical lab components
* Designed and built circuitry for optimizing experimental equipment performance

***Intern, IBM Poughkeepsie,*** *June—August 2015*

* Summer intern in Input/output Drawer and Adapter Development, Z Systems at IBM Poughkeepsie, NY
* Determined possible reasons for failures of an input/output card
* Set up and ran meetings with IBM hardware engineers to discuss reasons of card failures
* Collected and compiled card failure data into reports for management consumption
* Designed a tool to automatically distill failure data into simple reports

**Technical Projects**

***ENPH253 Robotics Course, UBC Engineering Physics,*** *May—August 2016*

* Designed and constructed a fully functional robot car capable of autonomous driving around a model city and pickup of passengers
* Conceptualized, designed, built, and tested the robot, including hardware, software algorithms, and support circuitry
  + - Required skills in SolidWorks (mechanical design), Java/Arduino (control algorithms), circuit design and construction (support circuitry)
* Working in a team of 4, responsible for hardware design and construction

***Mechanical Team, UBC Sailbot,*** *September 2014—May 2016*

* Member of the mechanical design and construction division of the University of British Columbia Sailbot team
* Helped to build and design a robotic (autonomous) sailboat built to cross the Atlantic Ocean
* Designed several components of the sailboat rigging, including a system of engines for furling the sail and design of forestay, side struts, and attachments to the mast
  + - Consulted with naval architects/engineers regarding design schemes, and integrated some suggestions into the design
    - Required skills in SolidWorks, AutoCAD
* Assisted in construction of the hull, deck, keel, and rudder
  + - Required skills in construction

**Other Experience**

***Volunteer, Lab of Professor David Jones, University of British Columbia****, September 2016—Present*

* Volunteer in an optics laboratory at UBC
* Responsible for circuit design, construction, and installation

***Waiter, LaStazione Italian Restaurant,*** *April 2015—August 2015*

* Waited tables at LaStazione Italian Restaurant
* Effectively communicated and interacted with co-workers and patrons in a high-pressure environment

***Lifeguard and Water Safety Instructor, Moriello Pool and Park,*** *April 2012—May 2015*

* Worked as a lifeguard and swim lesson instructor
* Saved multiple lives while lifeguarding

**Education**

***University of British Columbia,*** *September 2014—Present*

* Graduation anticipated in May 2019
* GPA: 84.1%
* Degree(s) sought: Bachelor’s degree in engineering, physics
* Credits Earned: 77 (by end of Summer 2016)

***State University of New York at New Paltz,*** *September 2013—May 2014*

* Took advanced mathematics/French courses while enrolled in high school
* GPA: 4.0 (A+)
* Degree sought: none

***New Paltz Central High School,*** *September 2010—June 2014*

* GPA: 99.82% (A+)
* Degree sought: High school diploma

**Awards and Achievements**

* *Salutatorian of New Paltz High School class of 2014*
* *University of British Columbia Chancellor’s Scholar—awarded to exceptional undergraduate students*
* *Academic All Canadian—collegiate varsity athlete with an A- average or greater*
* *Award for Service to the New Paltz Central School District*
* *Anthony C. Quinn Scholarship for academic and athletic excellence*
* *Xerox Award for excellence in Computer Science and Engineering from University of Rochester*
* *National AP Scholar—awarded to exceptional Advanced Placement students*
* *2nd Place in the British Columbia Water and Waste Association Junior Design Competition*
* *National Commended Scholar—awarded to exceptional students based on SAT scores*
* *Mid-Hudson Athletic League All-Academic Team—high school varsity athlete with a 95% GPA or greater*
* *Multiple awards for academic excellence in mathematics, physics, chemistry, biology, and foreign language (details provided on request)*