



Engineering Co-op Program  
University of Alberta

# Weichen Qiu



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w3ichen.github.io



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## University of Alberta

### Education

Computer Engineering, BSc Co-op	Class of 2023
Grade Point Average	3.4 / 4.0
Completed Academic Terms	5 of 8
Completed Co-op Work Terms	1 of 5
Availability Starting Jan 2021	8 months

### SKILLS

Self – Starter	Tech Savvy
Self – Learner	Problem Solver
Creative	Responsible
Active listener	Teamwork

### TECHNICAL SKILLS

#### DESIGN

SolidWorks  
Unity

#### CREATIVE

Photography  
Photoshop  
Lightroom  
Autodesk Maya  
Premiere Pro

Python  
MatLab  
Assembly

C ++  
SQL  
Git

#### PROGRAMMING

Linux  
HTML/CSS  
Arduino  
TensorFlow  
JavaScript  
Flask  
Java  
Django

## RELEVANT EXPERIENCE

### UNIVERSITY OF ALBERTA | Simulation Designer | Work

June 2019 – Present

- Published 3 comprehensive documentation manuals on how to use Javascript's JSXGraph, Glowsript's Visual Python, and Python's Bokeh libraries after extensive research (<https://engcourses-uofa.ca/interactive-elements-manual/>)
- Converted old Mechanical and Civil engineering interactive educational examples to Javascript and Python, with an improvement to latency from seconds to milliseconds
- Web administrator for Faculty of Engineering course's WordPress website (<https://engcourses-uofa.ca/>)
- Filmed and edited 110 engineering lab videos for 11 different courses in preparation for online course delivery with a group of 4 in 2 months

### WEB DEVELOPER | Project | <https://w3ichen.github.io> | <https://tkd.pythonanywhere.com> Nov. 2019

- Designed and programmed personal website entirely from scratch to host creative works in art, Autodesk Maya, Solidworks 3D design, photography, and videography. As well as, coding projects that are comprised mainly of web APIs, Flask and Django, and Machine Learning projects that I learned online
- Designed and programmed taekwondo club's website on Django framework with fully functional Admin GUI to modify content; actively used by club to organize announcements, events, forms, and photos

### FUTURE CREATORS | Project Lead | Club

Dec. 2019 – Present

- Developed a project kit on Machine Learning in Unity and a Django social media site with posting, commenting, and liking functionalities as a Project Lead
- A student group that teaches grades 7 to 12 students the basics of coding, Arduino, and 3D modeling

### HACKATHONS

- HackED Beta 2019 - Programmed a variation of Advanced Encryption System in a 24-hour hackathon with a team of 5
- HackED 2020 - Web scraped and analyzed public medical data to determine if the patient will die from cancer

## PUBLICATIONS

### Engcourses Manuals

Aug. 2020

- Published 3 comprehensive documentation manuals to Faculty of Engineering's courses website for use by Professors and Students to program interactive educational examples. The 3 libraries covered in detail are Javascript's JSXGraph, Glowsript's Visual Python, and Python's Bokeh. Where JSXGraph is used for 2D examples, VPython for 3D examples, and Bokeh deployed on Heroku for examples requiring Python libraries. (<https://engcourses-uofa.ca/interactive-elements-manual/>)

## EXTRACURRICULAR + CLUBS

### EARLS KITCHEN + BAR | Food Expeditor | Work

*Aug. 2018 – June 2019*

- o Maintained order, clarified customer requests, and corrected mistakes by communicating to the Sous-Chef and Manager, while working closely with kitchen staff and servers
- o Organized dishes according to table, while checking food for correctness and modifications
- o Fast-paced, teamwork and communication-heavy environment with up to 100+ reservations a night
- o Worked a maximum of 20 hours/week, often going overtime and called in on unscheduled days

### SWIM COACH | Strathcona High School | Volunteer

*Sept. 2018 – Present*

- o Coached a lane of 15 swimmers ranging from beginners to intermediates to win 30+ years of city championships

### UNIVERSITY OF ALBERTA TAEKWONDO CLUB | Social Media Coordinator | YT: @T1tkdClub

*Sept. 2019 – Present*

- o Social Media Exec tasked with managing and posting to the club's Instagram and YouTube channel, and with promotion

### UNIVERSITY OF ALBERTA MEDIA TEAM | FB: @UASUevents

*Dec. 2018 – Present*

- o Captured photos and video of campus events for promotion and advertising as a Senior volunteer with Student's Union
- o Welcomed new students to campus as a Week of Welcome (WOW) and New Student Orientation Volunteer

### STRATHCONA HIGH MEDIA TEAM | YT: @StrathconaHighSchool

*Sept. 2017 – June 2018*

- o Spearheaded promotional swim videos, shown at the athletic banquet, from concept to production. Directed and filmed 20 swimmers, scheduled interviews, contacted editors and scanned old yearbook photos
- o Pioneered first ever year in review video as the primary video editor after consulting with teachers
- o Operated livestream switchboard and video cameras during large school assemblies of 1500 people

### VOLUNTEERING

*2015 – 2018*

- o Volunteered at numerous city festivals in positions that interacted with children and the general public
  - o *Festivals:* Edmonton International Fringe Festival, Heritage Festival, Ice on Whyte, Taste of Edmonton and more
- o Volunteered with University's Spring Triathlon as a race marshal and swim lap counter in 2016 and 2017
- o Fundraised money for Scona Initiative's charity event by door-to-door donations and bottle drives from 2016 to 2018

## CERTIFICATIONS

- |  |  |
|--|--|
| o Solidworks Associate – Mechanical Design | <i>Solidworks – Dassault Systemes</i>          |
| o Class 5 GDL Driver's License             | <i>Government of Alberta</i>                   |
| o English, Mandarin, Basic French          | <i>Languages</i>                               |
| o Standard First Aid + CPR + AED           | <i>Apex Training Solutions</i>                 |
| o Construction Safety Training             | <i>Alberta Construction Safety Association</i> |
| o WHMIS Certified                          | <i>Alberta Construction Safety Association</i> |

## AWARDS + SCHOLARSHIPS

- |   |  |
|---|--|
| o Jason Lang Scholarship   GPA > 3.2          | <i>University of Alberta (2019)</i>                            |
| o Academic Excellence Scholarship             | <i>University of Alberta (2018)</i>                            |
| o AP Scholarship   Top 25 AP students         | <i>University of Alberta (2018)</i>                            |
| o Major Service Award   100 + Volunteer Hours | <i>Strathcona High School (2018)</i>                           |
| o National AP Scholar   Average score > 4/5   | <i>College Board (2018)</i>                                    |
| o Duke of Edinburgh Bronze                    | <i>Duke of Edinburgh International Award Foundation (2017)</i> |
| o Gold + Silver + Bronze Athletic Award       | <i>Strathcona High School (2018)</i>                           |
| o Honours with Distinction   90% + average    | <i>Strathcona High School + McKernan School</i>                |
| o Dave Mutch Construction + Woodwork Award    | <i>McKernan School (2015)</i>                                  |