

William Liu

☎ (608) 886 - 3074 // @willixl@cmu.edu // 🌐 www.williamliu.me

Experience

- **Uber ATG** // *Autonomy Infrastructure Engineering Intern*
| May 2018 — August 2018, Pittsburgh, PA
| Designed, proofed, implemented, and tested robust updates to autonomous vehicle operating system and offboard vehicle operator console.
- **Computer Architecture Lab at Carnegie Mellon** // *Researcher*
| Dec 2016 — Present, Pittsburgh, PA
| Publishing findings on increased efficiency in virtual and physical memory spaces, from both the hardware and software perspective.
- **Carnegie Mellon University** // *Teaching Assistant*
| Aug 2017 — Present, Pittsburgh, PA
| Teaching Assistant for Principals of Computation (15-110). Leading lab section and providing office hours to more than 100 students.

Projects + Awards

Detailed descriptions and more projects can be found at williamliu.me/portfolio.html

- **PennApps XVII: Modware** // *2nd Place + Hacker's Choice, Jan 2018*
| Modular, magnetically integrated hardware prototyping platform for software-focused developers. You focus on software, we take care of the hardware.
| **2nd Place out of 300+ teams at University of Pennsylvania.**
- **Facebook Global Hackathon: FB Discourse** // *Grand Prize, Nov 2017*
| Hardware-software integrated political debate digitizer and organizer. Presented to the VPs of Technology of OculusVR, Instagram, Messenger, and WhatsApp.
| **Best of 14 finalists from 11 different countries.**
- **TartanHacks: ResistAR** // *Grand Prize + Facebook's Favorite, Feb 2017*
| Augmented Reality circuit visualizer and solver. Powered by any smartphone.
| **Best of 150+ teams at Carnegie Mellon University.**
- **NASA Centennial Challenge: Mars Ascent Vehicle** // *Second Place, Apr 2016*
| *One mile apogee rocket & Autonomous Ground Support Equipment (AGSE) to secure payload from ground and prep rocket for launch.* Wrote over 400 pages of documentation, passing NASA's engineering checkpoints.
| **Our payload mechanism is the basis for NASA SLS's payload mechanism.**

Select Publication

"What Your DRAM Power Models Are Not Telling You: Lessons from a Detailed Experimental Study" *SIGMETRICS 2018.*

S Ghose, A G Yağlıkçı, R Gupta, D Lee, K Kudrolli, **W X. Liu**, H Hassan, K K. Chang, N Chatterjee, A Agrawal, M O'Connor, O Mutlu.

Interests/Misc.

Top 100 Pokémon Player, Filmmaking, League of Legends

Updated: May 31, 2018

Education

Carnegie Mellon University
Bachelor of Science, May 2020
Major in Cognitive Science
Minors in Computer Science and Robotics
Alpha Epsilon Pi Fraternity

Skills

Technical:

C/C++, Python, SML, HTML, CSS, Arduino, Raspberry Pi, Linux

Design:

InDesign, Photoshop, Illustrator, SolidWorks, AutoCAD, Inventor, Blender, Laser Cutting, 3D Printing

Misc:

LaTeX, Gantt Charts, Chinese, Spanish

Select Coursework *in progress

Technical:

Theoretical Computer Science // 15-251
Intro to Machine Learning // 10-401
Functional Programming // 15-150
*Computer Systems // 15-213
*Robot Kinematics & Dynamics // 16-384

Non-Technical:

Cognitive Psychology // 85-211
*Adaptive Decisions // 85-435
*Experimental Design for Psych // 36-309

Clubs/Activities

Scotch'n'Soda Theatre

Stage and Production Manager

CMU Tricking Club

Founder & President

Tricking is "an aesthetic blend of gymnastics, martial arts, and breakdancing."

Student Advisory Board

Board Member

Students for Urban Data Systems

Student Engagement Coordinator