

# STANLEY C. LIU

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## EDUCATION

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**University of Pennsylvania** **Philadelphia, PA**  
*M.S.E. in Electrical Engineering | Cumulative GPA: 4.0* *May 2026*

**University of Pennsylvania** **Philadelphia, PA**  
*B.S. in Bioengineering* *May 2025*

## EXPERIENCE

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**Toka Watches LLC** **Philadelphia, PA**  
*Founder* *September 2023 – present*

- Developed a smartwatch with accelerometer, GPS, and photoplethysmography sensors
- Embedded C & RTOS programming on an STM32 MCU. SPI/I2C/GPIO serial communication
- Pitched venture and received \$3000 in funding from Penn Wharton Innovation Fund

**Cepheid** **Sunnyvale, CA**  
*Consumables Engineering Intern* *May–August 2023*

- Programmed a computer-vision program to detect injection molding defects in COVID-19 test cartridges
- Oversaw manufacturing and quality control in-process testing, torque, pressure decay, and vacuum tests

**University of Pennsylvania: Richardson Laboratory** **Philadelphia, PA**  
*Research Assistant (PI: Andrew Richardson)* *March 2022–September 2023*

- Designed and tested printed circuit boards (PCB) using Altium
- Programmed python models to computationally simulate thalamocortical activity in response to stimulus

**Molecular Assemblies** **San Diego, CA**  
*Process Engineering Intern* *May–August 2022*

- Process development for optimizing high throughput-line enzymatic DNA synthesis for CRISPR
- Developed metrology studies to access filter lifetime of polyethylene frits and reagent % carry over risks
- Performed GageR&R, root cause analysis studies, and python programming on liquid handlers

**University of Southern California: Laboratory of Oncology/AIDS Research** **Los Angeles, CA**  
*Research Assistant (PI: Suraiya Rasheed)* *July 2018–January 2021*

- Developed microfluidic devices for HIV-1 blood sample preparation and detection.
- Integrated on-chip blood plasma separation with fluorescence detection of HIV-1 p24 antibodies

## LEADERSHIP

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**Christian Union Martus** **Philadelphia, PA**  
*Treasurer and Director of Operations* *March 2023 – February 2024*

- Oversaw budget of \$50,000, campus ministry of 50 students, weekly prayer meetings, and semester retreats

## RESEARCH PUBLICATIONS

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- Liu, S., Garg, N., Yoo, Paul., Lee, A., Rasheed, S., “A Microfluidic Device for Blood Plasma Separation and Fluorescence Detection of Biomarker using Acoustic Microstreaming”, *Sensors and Actuators A: Physical*, vol. 317 (2021) 112482, <https://doi.org/10.1016/j.sna.2020.112482>

## AWARDS

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Wharton Innovation Fund Grant (2023) | Eagle Scout (2021) | Davidson Fellow \$25,000 & Top Engineering Project in Nation (2021) | CES Young Innovators to Watch Award (2021) | Regeneron STS Top 300 Semi-Finalist (2021)