

# Zachary Enghardt

## Curriculum Vitae

Paul G. Allen Center  
185 E Stevens Way NE  
Seattle, WA 98195  
✉ zacharye@cs.washington.edu  
🌐 zachary.enghardt.com

### Education

- 2022 – **University of Washington**, *Paul G. Allen School of Computer Science & Engineering*,  
Ph.D. Student in Computer Science,  
Advised by Vikram Iyer and Shwetak Patel.
- 2017 – 2021 **Northwestern University**, *McCormick School of Engineering and Applied Science*,  
Master of Science in Computer Engineering,  
Bachelor of Science in Computer Engineering.

### Publications

- 2024 **From Classification to Clinical Insights: Towards Analyzing and Reasoning About Mobile and Behavioral Health Data With Large Language Models**,  
**Zachary Enghardt\***, Chengqian Ma\*, Margaret E. Morris, Xuhai "Orson" Xu, Chun-Cheng Chang, Lianhui Qin, Daniel McDuff, Xin Liu, Shwetak Patel, Vikram Iyer,  
*Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 8, Issue 2 (UbiComp '24)*.
- Exploring and Characterizing Large Language Models For Embedded System Development and Debugging**,  
**Zachary Enghardt**, Richard Li, Dilini Nissanka, Zhihan Zhang, Girish Narayanswamy, Joseph Breda, Xin Liu, Shwetak Patel, Vikram Iyer,  
*Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems (LBW '24)*.
- DeltaLCA: Comparative Life-Cycle Assessment for Electronics Design**,  
Zhihan Zhang\*, Felix Hähnlein\*, Yuxuan Mei\*, **Zachary Enghardt**, Shwetak Patel, Adriana Schulz, Vikram Iyer,  
*Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 8, Issue 1 (UbiComp '24)*.
- 2023 **MilliMobile: An Autonomous Battery-free Wireless Microrobot**,  
Kyle Johnson\*, **Zachary Enghardt\***, Vicente Arroyos\*, Dennis Yin, Shwetak Patel, Vikram Iyer,  
*Proceedings of the 29th Annual International Conference on Mobile Computing and Networking (MobiCom '23)*.
- 2021 **FaceBit: Smart Face Masks Platform**,  
Alexander Curtiss\*, Blaine Rothrock\*, Abu Bakar, Nivedita Arora, Jason Huang, **Zachary Enghardt**, Aaron-Patrick Empedrado, Chixiang Wang, Saad Ahmed, Yang Zhang, Nabil Alshurafa, Josiah Hester,  
*Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, Volume 5, Issue 4 (UbiComp '22)*.

### Fellowships and Awards

- Apr 2023 **NSF Graduate Research Fellowship Program (GRFP)**, *Honorable Mention*,  
Proposal: MilliMobile: Sub-Gram Robotic Sensor Swarms.
- Apr 2023 **National Defense Science and Engineering Graduate (NDSEG) Fellowship**, *Honorable Mention*,  
Proposal: MilliMobile: Sub-Gram Autonomous IoT.
- 2022 – 2023 **Pastry-Powered T(o)uring Machine Endowed Fellowship**,  
*Research fellowship awarded to select incoming Ph.D. students in Computer Science & Engineering.*
- 2017 – 2021 **Frank Livermore Trust Scholarship**,  
*Merit-based scholarship awarded to two Eagle Scouts each year to support undergraduate studies.*

## Research Experience

- Sep 2022 – **University of Washington**, *Ubiquitous Computing Lab*,  
Research Assistant.
- Conducting interdisciplinary work to apply Large Language Models (LLMs) to design and analyze data from sensors and embedded systems for applications in healthcare
  - Researching battery-free actuation and control for small-scale autonomous robots
- Feb 2021 – **Northwestern University**, *Ka Moamao Laboratory*,  
Dec 2021 Undergraduate Research Assistant,  
Advised by Josiah Hester.
- Designed a system of flexible wearable stickers and RF transmitters to automate circadian rhythm experiments for the DARPA NTRAIN program
  - Developed hardware and firmware for low-power health and sensing applications
- Sep 2019 – **Northwestern University**, *Rogers Research Group*,  
Mar 2020 Undergraduate Research Assistant,  
Advised by John A. Rogers.
- Wrote device firmware for implantable passively-powered oximetry devices
  - Designed and fabricated flexible millimeter-scale wireless circuits

## Industry Experience

- Feb 2022 – **Applied Materials**, Electrical Engineering Intern.  
Aug 2022
- Aug 2020 – **Tesla**, Autopilot Hardware Intern.  
Dec 2020
- Jun 2019 – **Applied Materials**, Electrical Engineering Intern.  
Sep 2019
- Jul 2018 – **Roku**, CS Intern.  
Sep 2018

## Volunteering

- 2023 – **New Graduate Student Orientation**, *Student Organizer*,  
Coordinated speakers and bonding activities for the two-day orientation for incoming PhD students in the School of Computer Science & Engineering.
- 2022 – **Ubiquitous Computing Lab**, *Outreach Coordinator*,  
Plan and run lab outreach events and demonstrations, such tours for industry affiliates and local schools.
- 2022 – **Pre-Application Mentoring Program**, *Peer Mentor*,  
Provided one-on-one mentoring to support prospective Ph.D. applicants from historically marginalized groups in Computer Science.

## References

### **Vikram Iyer**,

*Assistant Professor*,

Paul G. Allen School of Computer Science & Engineering, University of Washington,  
vsiyer@uw.edu.

### **Shwetak Patel**,

*Professor*,

Paul G. Allen School of Computer Science & Engineering, University of Washington,  
shwetak@cs.washington.edu.