

# Krithik Ranjan

Boulder, CO | krithik.ranjan@colorado.edu | linkedin.com/in/krithik-ranjan

## EDUCATION

**University of Colorado Boulder, CO** AUG 2022 - PRESENT

Ph.D. Creative Technology and Design, ATLAS Institute  
Advisors: Prof. Ellen Do and Prof. Michael Rivera

**Cornell University, NY** AUG 2018 - MAY 2022

B.Sc. Electrical and Computer Engineering, College of Engineering

## RESEARCH EXPERIENCE

**ACME Lab and Utility Research Lab, ATLAS Institute, CU Boulder** AUG 2022 - PRESENT

Graduate Research Assistant  
Advisor: Prof. Ellen Do; [www.colorado.edu/atlas](http://www.colorado.edu/atlas)

Researching affordable tangible programming approaches for effective computing education.

**Hybrid Body Lab, Cornell University** FEB 2021 - MAY 2022

Undergraduate Research Assistant  
Advisor: Prof. Cindy Kao; [www.hybridbody.human.cornell.edu/](http://www.hybridbody.human.cornell.edu/)

Supported the development of construction toolkits for on-skin interfaces.

**Meta Design and Technology Lab, Cornell University** JAN 2021 - JAN 2022

Undergraduate Research Assistant  
Advisor: Prof. Jay Yoon; [www.mdtl.human.cornell.edu/](http://www.mdtl.human.cornell.edu/)

Developed a custom smart speaker to research the impact of UX writing style in voice-based AI assistants.

**Batten Research Group, Cornell University** JUN 2020 - MAY 2021

Undergraduate Research Assistant  
Advisor: Prof. Christopher Batten; [www.csl.cornell.edu/~cbatten/](http://www.csl.cornell.edu/~cbatten/)

Developed, optimized, and evaluated operations on a novel manycore computer architecture.

## PUBLICATIONS

Rishi Vanukuru, Suibi Che-Chuan Weng, **Krithik Ranjan**, Torin Hopkins, Amy Banic, Mark D. Gross, Ellen Yi-Luen Do. 2023. DualStream: Spatially Sharing Selves and Surroundings using Mobile Devices and Augmented Reality. In IEEE International Symposium on Mixed and Augmented Reality (ISMAR). October 16-23, 2023, Sydney, Australia. IEEE, 10 pages.

**Krithik Ranjan**, Peter Gyory, Michael L Rivera, and Ellen Yi-Luen Do. 2023. Cartoonimator: A Low-cost, Paper-based Animation Kit for Computational Thinking. In Interaction Design and Children

(IDC '23), June 19–23, 2023, Chicago, IL, USA. ACM, New York, NY, USA, 5 pages.

Peter Gyory, **Krithik Ranjan**, Zhen Zhou Yong, Clement Zheng, and Ellen Yi-Luen Do. 2022. Directing Tangible Controllers with Computer Vision and Beholder. In SIGGRAPH Asia 2022 Emerging Technologies (SA '22 Emerging Technologies), December 6–9, 2022, Daegu, Republic of Korea. ACM, New York, NY, USA, 2 pages.

Pin-Sung Ku, Md. Tahmidul Islam Molla, Kungpeng Huang, Priya Kattappurath, **Krithik Ranjan**, and Hsin-Liu (Cindy) Kao. 2021. SkinKit: Construction Kit for On-Skin Interface Prototyping. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 5, 4, Article 165 (December 2021), 23 pages.

Lin Cheng, Peitian Pan, Zhongyuan Zhao, **Krithik Ranjan**, Jack Weber, Bandhav Veluri, Seyed Borna Ehsani et al. 2021. A Tensor Processing Framework for CPU-Manycore Heterogeneous Systems. In IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems 41, no. 6, 16 pages.

## WORK EXPERIENCE

**Qualcomm Technologies, QCT-SW Team** JUN 2021 - AUG 2021  
Embedded Software Engineering Intern  
www.qualcomm.com

**Cornell University Autonomous Underwater Vehicle** OCT 2018 - MAY 2022  
Electrical Subteam Lead  
cuauv.org

**Cornell University Sustainable Design, Sustainable Mobility** JAN 2019 - MAY 2020  
Electrical Subteam Lead  
cusd.cornell.edu/projects/susmob/

## TEACHING EXPERIENCE

**University of Colorado Boulder**  
ATLS 2270 Computational Foundations II — Teaching Assistant JAN 2024 - MAY 2024  
ATLS 3300 Object — Teaching Assistant JAN 2023 - MAY 2023

**Cornell University**  
ECE 2400 Computer Systems Programming — Teaching Assistant AUG 2020 - DEC 2020  
ECE 2100 Circuits — Teaching Assistant JAN 2020 - MAY 2020  
MATH 1110 Calculus I & MATH 1120 Calculus II — Course Assistant AUG 2019 - MAY 2020

## MENTORING EXPERIENCE

**Lena Rakkah**, Boulder Valley School District AUG 2023 - DEC 2023

**Ignatius Nwankwo**, Morgan State University JUN 2023 - AUG 2023

**Sergio Bustamante**, University of Florida JUN 2023 - AUG 2023

## HONORS

**Dr. Awtar and Teji Singh Graduate Fellowship 2023** — \$20,000

**Dean's List**, College of Engineering, Cornell University — Fall 2018 to Spring 2022

**Tata Scholarship** for Indian Students at Cornell University — 100% financial need for undergraduate program

**Tau Beta Pi, NY Delta Chapter** at Cornell University — Inducted for being in the top 12.5% of the Junior class in the College of Engineering; elected as the Professional Development Chair of the society.

## SKILLS

Programming in C, C++, Python, Javascript, Rust | Computer Vision Techniques | Microcontroller and Embedded Firmware | PCB Schematic and Layout Design with KiCad | Prototyping with Arduino, Raspberry Pi, and other embedded systems | Hardware Modeling with PyMTL, Verilog HDL | 3D Modeling with Fusion360 | 3D Printing and Laser Cutting |