

Paeon Luby

[GitHub](#)
[Personal Site](#)

(804) 773-0608
paeon.luby@richmond.edu

Education

Ph.D., Informatics

Indiana University Bloomington, IN, 2025-Present (anticipated May 2030)

B.S., Computer Science, Psychology (Neuroscience Concentration); GPA: 3.95

B.A., Latin American, Latino, and Iberian Studies; GPA: 4.00

University of Richmond, VA, 2021-2025

Hispanic Studies (Study Abroad)

University of Alcalá, ES, Spring 2024

Honors: Departmental Honors in Computer Science, Richmond Scholar (full tuition, room and board), Phi Beta Kappa inductee

Technical Skills

Programming languages: C#, C++, Java (Concurrent Programming), MIPS Assembly, Python, SQL

Software packages: Unity3D, Robot Operating System, Oracle SQL Developer

Laboratory skills: Qualitative and quantitative data analysis and collection, fluorescent imaging, immunohistochemistry, machine learning

Research

Departmental Honors in Computer Science

Human Computer Interaction Lab, University of Richmond, VA

PI: Dr. Mmachi Obiorah

Independently designed and executed a study comparing spatial interfaces of the Tower of London Task (i.e. virtual reality, physical, and online versions) with over 30 participants.

Programmed a virtual reality game in Unity3D.

Visiting Researcher

May 2023 - Present

Addison Care Lab, New Mexico State University, NM

PI: Dr. Michael C. Hout

- Programmed and deployed a virtual reality game in Unity3D on over 50 participants as a proof of concept for training search-and-rescue workers.
- Wrote SQL scripts in Oracle SQL Developer for processing output files and visualized pilot data.

Undergraduate Research Assistant

Jan 2022 - Present

Behavioral Neuroscience Lab, University of Richmond, VA

PI: Dr. Kelly Lambert

- Mounted, coverslipped, imaged, and quantified blood vessels using light thresholding and machine-learning-based software.
- Designed and implemented pre-clinical study comparing behavioral and neurological effects of exposure to virtual and physical enriched environments.

Undergraduate Research Assistant

Aug 2022 - May 2025

Visual Cognition Lab, University of Richmond, VA

PI: Dr. Arryn Robbins

- Helped run 52 participants on the eye tracker and expanded original analyses of guidance and verification with linear mixed models examining category variability, accuracy during training, and frequency of exposure as predictors of search performance.

REU Research Scholar

June - Aug 2023

NIMBUS Lab, University of Nebraska-Lincoln, NE

PI: Dr. Justin Bradley, Dr. Dung Hoang Tran

- Trained and tested three object detection algorithms with varying levels of computational efficiency (YOLOv5n, YOLOv5s, and YOLOv5m).
- Deployed weights on TurtleBot in custom computer simulation of household environment and evaluated each algorithm's performance in following a human actor.

Publications and Presentations

Evdokimov, A., Enikeeva, A., **Luby, P.**, & Robbins, A. (2024). How scientists use webcams to track human gaze. *Frontiers for Young Minds*. 12:1259404. doi: 10.3389/frym.2024.1259404

Kent, M.H., Crockett, B., Narayanan, A., Dilandro, I.G., **Luby, P.**, Wagner, A.G., Mauco, A., Handford, G., Hunter, R., Richter, T., Richardson, J., Harding, O., Hartvigsen, S.C., Jacob, J.C., & Lambert, K.G. (2024). Neurobiological indices of vigilance and resilience in wild and laboratory-bred rodents (*Rattus norvegicus*). *Frontiers in Ethology* (manuscript in preparation).

Luby, P., Tome, I., Ferrell, M., Hartvigsen, S., Kent, M., & Lambert, K. (2025). Rewiring reality: How virtual and physical spaces reshape *R. Norvegicus* neuroplasticity. *Poster presented at the International Behavioral Neuroscience Society Annual Meeting in Tromsø, NO (June 2025)*

Luby, P., Mathis, A., White, B., Penn, R., Robbins, A., & Hout, M. C. (2024). Using virtual reality to simulate wilderness search and rescue 'clue-finding' tasks. *Poster presented at the 32nd OPAM in New York City, NY (November 2024)*

Luby, P., Richardson, J., Gomez-Sanchez, E., Gomez-Sanchez, C., Harding, O., Kent, M., Hartvigsen, S., & Lambert, K. (2024). The potential impact of environmental complexity on cerebrovasculature in wild and laboratory *R. norvegicus*. *Poster presented at the 15th International Congress for Neuroethology in Berlin, DE (July 2024)*

Luby, P., Bradley, J., & Tran, D. H. (2023). Comparing object detection algorithms for computationally constrained human-following robots. *Poster presented at the Nebraska Summer Research Program Symposium in Lincoln, NE (Aug 2023)*

Luby, P., Shatalov, Y., Richardson, J., Gomez-Sanchez, E., Gomez-Sanchez C., Harding, O., Kent, M., Hartvigsen, S., & Lambert, K. (2023). Beyond the neurons: Cerebrovascular comparisons in wild-trapped and laboratory rats (*Rattus norvegicus*). *Poster presented at the International Behavioral Neuroscience Society Annual Meeting in Niagara Falls, ON (June 2023)*

Luby, P., & Robbins, A. (2023). Category variability provides challenges to learning and search performance. *Poster presented at the 23rd Annual Meeting of the Vision Sciences Society in St. Pete's, FL (May 2023)*

Luby, P., & Robbins, A. (2023). Category variability provides challenges to learning and search performance. *Poster presented at the North Carolina Conference on Cognition in Winston Salem, NC (Feb 2023)*

Professional Development

President and Founder

Jan 2022 – May 2025

[Girls Who Code](#), University of Richmond, VA

- Oversee delegation and administration of funding, media, and curriculum plans for semesterly networking, volunteer, competitive coding, and community-building events.
- Guide weekly meetings to build community among members and organize events.

Videography Consultant

Sept 2021 – May 2025

Technology Learning Center, University of Richmond, VA

- Provide software and equipment consulting for production of posters, audio, video, graphics, virtual reality, and 3D objects.

Drill Instructor

Aug 2022 - April 2023

Latin American, Latino, & Iberian Studies Dept., University of Richmond, VA

- Prepared and led biweekly oral exercises and examinations for intensive intermediate and beginner Spanish.

Awards and Honors

Award for Outstanding Research in Computer Science

April 2025

University of Richmond, VA

- Awarded annually to the student excelling in computer science focused undergraduate research or scholarship, as determined by the department faculty.

Award for Outstanding Research in Psychology

April 2025

University of Richmond, VA

- Awarded annually to the student demonstrating exceptional research aptitude in psychology or neuroscience., as determined by the department faculty.

Dickinson Award

March 2024

University of Richmond, VA

- Selected for \$1,500 grant given annually to a rising senior or seniors for a research proposal deemed meritorious by a panel of faculty in Psychology.

Summer Research Program 2nd Place

Aug 2023

University of Nebraska-Lincoln, NE

- Voted 2nd place of 124 undergraduates' projects at the 2023 Nebraska Summer Research Symposium, according to peer and expert scores.

National Eye Institute Early Career Scientist Travel Grant

May 2023

Vision Sciences Society Meeting, FL

- Received a \$500 grant to attend the 2023 Vision Sciences Society meeting.

B. Lewis Barnett III Award for Outstanding Service

April 2023

University of Richmond, VA

- Chosen by the computer science faculty for embodying Dr. Lewis Barnett's dedication to the Department and University, a recognition based on my leading role in the University's Girls Who Code chapter and its campus and community engagement.