Javon Hickmon

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EDUCATION

University of Washington – MS Computer Science *Sept. 2024 – June 2026*

University of Washington – BS Computer Science (with Honors) *Sept. 2021 – June 2024*

Olympic College - AA *Sept. 2019 – June 2021*

RESEARCH INTERESTS

My interests broadly include **Human-AI Interaction**, **Responsible AI,** and **ML Fairness**. I currently explore ways to evaluate and augment morality within machine learning systems to be aligned with users' morals. My goal is to mitigate the risks associated with AI systems by improving their ethical capabilities.

PUBLICATIONS

Multimodal Approaches to Fair Image Classification: An Ethical Perspective *June 2024*

- Undergraduate Honors Thesis

Multimodal Ensembling for Zero-Shot Image Classification (Abstract) *Feb. 2024*

- Venue: AAAI 2024

RESEARCH EXPERIENCE

Independent Research *June 2025 - Present*

- Current morality datasets used for fine-tuning Language Models do not have extensive information about the annotators who labelled the data. This project aims to explore how diverse annotator demographics (such as nationality) could improve the moral adherence of Language Models deployed within communities that match those demographics.
- Working with **Dr. Katharina Reinecke** and Dr. Colin Marshall.

Research Assistant – RAIVN Lab *Dec. 2022 - Present*

- Currently developing a project to balance the moral judgements produced by Multimodal Models, by aligning the morality embodied within the image and text domains.
- Led the development of D3G, a project aimed at offsetting harmful demographic bias within any **Vision-Language Model**. Achieved higher and more balanced classification accuracies when compared to OpenAI's CLIP model.
- Mentored by **Dr. Ali Farhadi** and Sarah Pratt.

Research Scientist Intern – NASA *June 2024 – Sept. 2025*

- Multispectral Imaging for Non-contact Cognitive State Estimation.
- Led the research and development of technology aimed at the accurate tracking and monitoring of human cognitive workloads.
- Designed novel experiments to induce high cognitive workload in a controlled environment.
- Utilized hyperspectral imaging and Deep Learning to create a high-throughput Convolutional Neural Network to predict mental workloads for participants.

Undergraduate Research Assistant – Peleg Lab *June 2023 – June 2024*

- [poster] Honeybee Swarm Dynamics: Investigating the Relationship Between Individual Decision Making and Collective Foraging.

- Created a novel **multi-object tracking and segmentation** algorithm that could track honeybees throughout the entirety of 5-minute-long videos without any loss in accuracy or spatiotemporal coherence.
- My algorithm outperformed XMem, a state-of-the-art **long-term video object segmentation** architecture. It achieved consistently higher long-term segmentation accuracies when evaluated in the context of our behavioral assay.
- Mentored by **Dr. Orit Peleg**.

Independent Research *Jan. 2024 – Mar. 2024*

- [poster] Audio-Lyric Alignment via Emotional Sentiment.
- Trained a large multimodal Deep Neural Network to perform cross-modal audio-to-lyric retrieval. Explored the feasibility of aligning audio and lyrics within a **multimodal** embedding space, using emotional sentiment as a similarity metric for contrastive learning.

Independent Research *Jan. 2024 – Mar. 2024*

- [poster] When and Why do Large Language Models Exhibit Biases?
- Explored whether LLM bias could be traced back to specific data points, which would allow for a flagging system when updating datasets, or even the utilization of model unlearning.
- Using red-teaming and "What's In My Big Data" identified sources of harmful outputs, then proposed methods to offset this bias using Reinforcement Learning via Human Feedback.

PROFESSIONAL EXPERIENCE

SDE Intern – Amazon *June 2022 - Sept. 2022*

- Built technologies within a large, **distributed computing environment** for Amazon EasyShip. Designed and developed features for batch shipping within the **full-stack** mobile application, focusing on **REST APIs**, high-quality code architecture, and **test automation**.

Lead Software Development Intern – CoMotion Labs *June 2023 – Sept. 2023*

- Formed a project to advance Digital Literacy in marginalized communities worldwide. Digital Tether was entirely student-led and fully funded by CoMotion Labs.
- Led my team to write the **full-stack** codebase for our primary product, a **Google Chrome** extension. Hosted weekly SCRUM meetings for the team of 4 software developers.

TEACHING & MENTORSHIP EXPERIENCE

Instructor – University of Washington *Sept. 2024 – Present*

- Instructor for CSE 190W, CSE 190Y, and CSE 197Y.
- These courses are for students in the Allen School Scholars Program, a program designed to support individuals from first-generation, low-income, and underserved communities.
- Led a team of 22 TAs across the series of courses. Developed course materials and restructured content to improve student learning.

Lead Teaching Assistant – University of Washington *Mar. 2022 – Sept. 2024*

- Intro to Programming 1, 2, and 3 supplemental courses. Promoted to Lead TA Fall 2023.
- Developed **new course materials**, assignments, and assessments with the instructor. **Wrote problems** for the midterm and hosted office hours with 30+ students.
- **Managed** and organized grading responsibilities for a team of 9 teaching assistants, ensuring fair and consistent evaluation of student work.

COM^2 Big/Little Mentorship Program – University of Washington *Oct. 2023 - Present*

- **Mentored** 3 first-year students for the Computing Community (COM²) Big/Little Mentorship Program within the Paul G. Allen School of Computer Science and Engineering.

LEAP Summer Research Panelist – University of Washington *Nov. 2023*

- Selected from a highly competitive pool of undergraduate students to speak about my summer research experience in the Peleg lab.

Allen School Research Roundtable Panelist – University of Washington *Apr. 2023*

- Spoke to 60 admitted Computer Science students about my experience performing research at the undergraduate level. Contributed to academic discourse and supported future researchers.

AP CSA Content Presenter – Code.org *Mar. 2022*

- Impacted thousands of students worldwide by utilizing innovative teaching methods and creative approaches to present Computer Science Principles in a fun and engaging manner for the **Code.org** AP Computer Science A curriculum.
- Promoted diversity, equity, and inclusion in Computer Science by providing my experiences and encouraging participation from students from underrepresented backgrounds.

Visiting Speaker – Bluffton Highschool *Dec. 2022*

- Shared my Computer Science journey with a class of 30 high school students. Offered guidance in their studies along with their future career pursuits.

CONFERENCES PRESENTED

Association for the Advancement of Artificial Intelligence 2024 *Feb. 2024*

- Multimodal Ensembling for Zero-Shot Image Classification [proposal]

The Gabriel E. Gallardo Symposium *Apr. 2024*

2023 SACNAS NDiSTEM Conference *Oct. 2023*

- Honeybee Swarm Dynamics: Investigating the Relationship Between Individual Decision-Making and Collective Foraging [poster]

2023 UCLA National McNair Conference *May 2023 - July 2023*
STARS Celebration Conference
Paul G. Allen School Undergraduate and Master's Research Showcase

- Thinking Beyond Images: Using Chain-of-Thought Prompting to Harness the Power of Language in Multimodal Models [poster][presentation]

HONORS

NSF Graduate Research Fellow *2025*

NASA GEM Fellow *2024*

Husky 100 Scholar *2024*

- Selected as one of the top 100 students who made the most out of their time at the University of Washington, a school of 40,000 students

AAAI Undergraduate Consortium Scholar *2024*

- Selected as a top student researcher and presented research proposal at AAAI 24

Google CS Research Mentorship Program Scholar *2023 – Present*

- Accepted to a three-month program that matches students with Google mentors and peers to support their pursuit of computer science research pathways

Ronald E. McNair Post-Baccalaureate Achievement Scholar *2023 – Present*

- Selected from a competitive pool of students as a strong potential Ph.D. applicant

Leo Maddox Foundation Endowed Scholarship *2023 – Present*

Washington State Opportunity Scholar *2021 - Present*

Office of Minority Affairs and Diversity Merit Scholar *2022 - Present*

Bava Scholarship *2021 - Present*

Dean's List *2021 - Present*

President's List *2021 - Present*

LEADERSHIP EXPERIENCE

Student Advisor – COM² (Computing Community) *Sept. 2024 – May 2025*

- Developed and hosted the Paul G. Allen School's **first-ever** student-led high school and middle school outreach program. Collaborated with Seattle Public Schools to present content for 577 students in 22 classes at 10 schools.
- Created the Allen School's **first** outreach program with the Seattle Public Library. Organized a team of 10 volunteers to present an introduction to programming workshop at 4 library branches across the greater Seattle area.

Education Director – COM² (Computing Community) *May 2023 – May 2024*

- Headed the development processes and led a team of **10 student leaders** to create **10+** events. These were some of the first skill-building workshops COM² has hosted since 2013.

Social Events Coordinator – COM² (Computing Community) *May 2022 – May 2023*

- Led all social event planning and execution by coordinating a team of 20 officers to create **more than 30** social events. **500+ CSE undergraduates**, graduate students, and professors attended our largest event.

Associate Officer – Association for Computing Machinery (now COM²) *May 2021 - May 2022*

- Planned and executed seven social events throughout the year. Our largest event had 350 attendees. Communicated with 20 team members and managed tasks efficiently.
- Raised **over $1200** in funds for non-profit organizations, such as Code.org, Black Girls CODE, and the U District Food Bank.