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| CONTACT | Email: whitev4@wwu.edu Website: vivianwhite.github.io LinkedIn: linkedin.com/in/vivian-white |
| RESEARCH INTERESTS | I am a computer scientist focused on computational neuroscience and machine learning . I am interested in collaborative and interdisciplinary approaches to deepen our scientific understanding of neural networks. |
| PUBLICATIONS | <ol style="list-style-type: none">3. V White, M Chaudhary, G Wolf, G Lajoie, KD Harris. Learning Stochastic Rainbow Networks. NeurIPS Workshop on Scientific Methods for Understanding Deep Learning, 2024.2. V White, A White, J Wild, T Nguyen, F Huang. Human Error Scenario Analysis of Software Defects. ISSRE Workshop on Human Factors for Software Dependability, 2024.1. V White, M Chaudhary, G Wolf, G Lajoie, KD Harris. Learning and Aligning Structured Random Feature Networks. ICLR Workshop on Representational Alignment, 2024. |
| EDUCATION | Western Washington University , Bellingham, Washington. <ul style="list-style-type: none">· M.S., Computer Science, expected June 2025, GPA 4.00/4.00· B.S., Computer Science, June 2024, GPA 3.78/4.00<ul style="list-style-type: none">· Minors in Mathematics and Honors Interdisciplinary Studies |
| GRANTS AND AWARDS | Graduate <ul style="list-style-type: none">· Dean J. Alan Ross Travel Fund Award, WWU, 2024· CS Graduate Fellowship, WWU, 2024· Graduate Recruitment Tuition Waiver, WWU, 2024 Undergraduate <ul style="list-style-type: none">· Outstanding Undergraduate in Computer Science, WWU, 2024· 1st-place award for CS poster presentation, ERN Conference, 2024· Barbara Ellen Maguire-Veith Family Scholarship, WWU, 2023· IN-BIC Fellow, 2023· Lars and Elaine Giusti Scholarship for Computer Science, WWU, 2022· Computer Science/Math Distinguished Scholar Award, WWU, 2020-2023· Western Foundation Distinguished Scholar Award, WWU, 2020· Merit Scholarship, WWU, 2020· Admissions Achievement Award, WWU, 2020· Admissions Annual Scholarship, WWU, 2020· Scholarship Award, WSECU, 2020 |
| RESEARCH EXPERIENCE | Computational Neuroscience Research Assistant, WWU, June 2022–present <ul style="list-style-type: none">· Advised by Dr. Kameron Decker Harris studying more interpretable models of learning in neural networks trained for vision tasks· Developed structured random feature networks with learnable weight covariances and deep stochastic rainbow networks· Presented findings at multiple national and international conferences and workshops· Published papers to the 2024 ICLR Workshop on Representational Alignment and NeurIPS Workshop on Scientific Methods for Understanding DL Human Errors in Software Engineering Research Assistant, WWU, Sept 2023–June 2024 <ul style="list-style-type: none">· Advised by Dr. Fuqun Huang studying root causes of human errors behind programming defects· Led a team analyzing cognitive roots of 120 software defects from six open-source repositories· Published paper to the 2024 ISSRE Workshop on Human Factors for Software Dependability Research Intern at Mila - the Quebec AI Institute, Montréal, QC, July–Sept 2023 <ul style="list-style-type: none">· Advised by Dr. Guy Wolf and Dr. Guillaume Lajoie studying learnability in structured random feature networks during my IN-BIC fellowship· Active member of two graduate research labs· Funded by grant from International Network for Bio-Inspired Computing (IN-BIC) through NSF AccelNet program (2019976) |

Computer Vision Research Assistant, WWU, April 2021–March 2022

- Worked with Dr. Scott Wehrwein on international borders project applying machine learning techniques to international border legibility tasks
- Web scraped satellite images of international borders using Bing Maps API
- Gained skills reading computer vision research papers and collaborating effectively on a team

RESEARCH TALKS

Learning Stochastic Rainbow Networks

- NSF Emerging Researchers National (ERN) Conference, Atlanta, GA, Mar 2025
- Mihales Lab, Allen Institute for Brain Science, Seattle, WA, Jan 2025

Learning and Aligning Structured Random Feature Networks

- NeuroAI Workshop, University of Oregon, Eugene, OR, Aug 2024
- Hutchinson ML Research Group, Western Washington University, Bellingham, WA, June 2024

Unveiling the Cognitive Roots: Human Error Scenario Analysis of Software Defects

- Senior Project Symposium, Western Washington University, Bellingham, WA, May 2024

Randomized Scattering Convolutional Networks

- Bonner Lab, Johns Hopkins University, virtual, Sept 2023
- RAFALES Lab, Mila, Montréal, QC, Aug 2023
- Neuro-AI Computations Research Group, Mila, Montréal, QC, Aug 2023

POSTER

PRESENTATIONS

Learning and Aligning Structured Random Feature Networks

- CoNectome Symposium, University of Washington, Seattle, WA, May 2024
- Scholars Week, Western Washington University, Bellingham, WA, May 2024
- ICLR Workshop on Representational Alignment, Vienna, Austria, May 2024
- NSF Emerging Researchers National (ERN) Conference, Washington DC, Mar 2024

Randomized Scattering Convolutional Networks

- DeepMath Conference, Johns Hopkins University, Baltimore, MD, Nov 2023
- NeuroAI Workshop, Mila, Montréal, QC, Oct 2023
- NSF S-STEM Scholars Meeting, Washington DC, Sept 2023
- Scholars Week, Western Washington University, Bellingham, WA, May 2023
- NeuroAI Seattle, University of Washington, Seattle, WA, Sept 2022

TECHNICAL SKILLS

Languages: Python (PyTorch, numpy, pandas, scikit-learn), Java, C, Javascript

Systems: Bash, Linux, L^AT_EX, git, HPC cluster environments, AWS

REFERENCES

Kameron Decker Harris

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Guillaume Lajoie

Associate Professor, Department of Mathematics and Statistics, Université de Montréal
Core Academic Member, Mila
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Filip Jagodzinski

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