JACKSON ESHBAUGH

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Bethlehem, PA — 18020, USA

EDUCATION

- **Lafayette College** *August 2023–May 2027*
  B.S., Computer Science Easton, PA
  - GPA: 4.00/4.00

- **Lafayette College** *August 2023–May 2027*
  A.B., French Language Easton, PA
  - GPA: 4.00/4.00

RESEARCH INTERESTS

Topics

Machine Learning Interpretability Computational Linguistics
Theoretical Foundations of Artificial Intelligence

Guiding Questions

How do we make neural networks more transparent?
How do linguistic structure and semantics interact in multilingual NLP models?

PUBLICATIONS & PREPRINTS

C=CONFERENCE, J=JOURNAL, P=PREPRINT, S=IN SUBMISSION, T=THESIS

P.1 **Eshbaugh, J**. Fidelity Isn't Accuracy: When Linearly Decodable Functions Fail to Match the Ground Truth. 2025. arXiv:2506.12176.

S.1 **Eshbaugh, J**., Tiwari, C., and Silveyra, J. A Modular and Multimodal Generative AI Framework for Urban Building Energy Data: Generating Synthetic Homes. 2025. Submitted to *Energy & Buildings*. arXiv:2509.09794.

POSTERS & PRESENTATIONS

[1] **Eshbaugh, J.** (Sep 2025). "Synthetic Homes: A Modular and Multimodal Generative AI Framework for Urban Building Energy Data." *Lafayette College Bicentennial Weekend Poster Session*, Easton, PA. [poster]

EXPERIENCE

- **Department of Computer Science, Lafayette College [🌐]** *August 2024 - Present*
  Teaching Assistant Easton, PA
  - Assist professors with teaching duties by helping students during class meetings.
  - Hold two review sessions per week, covering course content.
  - Produce materials such as worksheets and presentations for sessions.
  - Praised by students as an outstanding teacher who cares and can explain complex things in ways that make sense.
  - More information on my teaching page.

- **Department of Computer Science, Lafayette College [🌐]** *June 2025 - Present*
  EXCEL Scholar Easton, PA
  - Advisor: Dr. Jorge Silveyra
  - Conduct meaningful, novel research in machine learning.
  - Focus on applying ML concepts to the energy sector, employing computational techniques in novel ways.
  - Run experiments, draw conclusions, and write results.
  - More information on my research page.

SKILLS

- **Programming Languages:** Python, Java, JavaScript, C, ML
- **Machine Learning:** PyTorch, TensorFlow, NumPy
- **Other Tools & Technologies:** LaTeX

Honors and Awards

- **Marquis Scholarship** *May 2023*
  Lafayette College [🌐]
  - Demonstrated intellectual curiosity in addition to superior academic achievement.
  - Recipients display the Marquis' ideals of global citizenship, scholarly pursuits, leadership, and concern for others.
- **Dean's List** *F23, S24, F24, S25*
  Lafayette College
  - Achieved a Semester GPA of 3.60 or higher.

Volunteer Experience

- **Audio/Visual Specialist** *July 2021 - Present*
  Hope Alliance Church [🌐]
  - Design and operate weekly worship slides and sermon visuals
  - Configure live stream and projection systems for services
  - Run slides and broadcast during live events
  - Troubleshoot technical issues quickly and independently
  - Maintain and reset the worship space after services
  - Apply skills in graphic design, live sound, and audiovisual tech
  - Serve faithfully by supporting worship through technical service
- **Audio/Visual Specialist** *September 2023 - Present*
  Lafayette DiscipleMakers Christian Fellowship [🌐]
  - Similar service to the above with no live stream component

Certifications

- **Deep Learning Specialization** *June 2025*

Additional Information

Languages Spoken

English (Native Tongue), French (Fluent; Professional Competency)

Interests

Music (Jazz Vocals, Trombone, Piano, Composition); Photography and Photo Editing; Videography and Video Editing