

ROBERT M. HOPKINS

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ABOUT:

Computer scientist, linguist. Passionate about the intersection of human language and computation. Interested in applying my skills in linguistic analysis and programming to advance understanding of human language and language technology.

EDUCATION:

University of Maryland, College Park, Honors College – College Park, MD *B.S., B.A.*

Anticipated May 2026

GPA: 4.0

- B.S. in Computer Science
 - Coursework: Discrete Structures, Programming Languages, NLP, Compilers, Theory of Comp., etc.
- B.A. in Linguistics – Grammar and Cognition
 - Coursework: Syntax, Semantics, Computational Ling., Acquisition, etc.

WORK EXPERIENCE:

Critical Technology Protection Decision Framework (CPT-DF) Intern *ARLIS*

August 2024–October 2025

- Developed an agent-based simulation model of the innovation and startup ecosystem using insights from subject-matter experts and data from Pitchbook.
- Re-engineered the original Python model in Julia, achieving more than 250% performance improvement.
- Emphasized reproducibility and customizability, supported by over a hundred unit and integration tests.
- Designed, implemented a modular visualization interface for innovation metrics following model interventions.
- Role expanded over time, retained repeatedly beyond the original internship period.

Linguistics TA *LING311 Phonology I*

January 2025–May 2025

- Tracked learning and provided feedback on assignments to a class of 30 students
- Provide input on test and assignment design as well as technical support to the instructor
- Prepare and administer in-class exercises

Research for Intelligence & Security Challenges (RISC) Intern *ARLIS*

June–August 2024

- Researched remotely with interdisciplinary team to synthesize recommendations on U.S. innovation policy to protect IP while promoting innovation
- Presented in a classified environment to intelligence community professionals

Computer Science TA *CMSC132 Object-Oriented Programming II (Java)*

September 2023–December 2023

- Provided personalized support to students during office hours review sessions, answering questions related to general programming topics and projects, and helping them prepare for exams
- Graded assignments, exams, and projects, providing feedback to improve students' understanding

RESEARCH EXPERIENCE:

Undergraduate Research Assistant *UMD Language Acquisition Lab (PI: Jeffrey Lidz)*

September 2025–Current

- Handled participant data and experimental logistics in a research environment
- Developed skills in data organization, experimental workflow, research design

NSF/NIST Research Fellow *Institute for Trustworthy AI in Law & Society (TRAILS)*

June–August 2025

- Led project direction and design decisions for a team of five to develop a verification system for AI VQA systems for blind and low-vision users, leveraging outputs' vector embeddings to ensure consistency.

Undergraduate Research Assistant *Semantics of majority quantifiers & algorithms*

September 2024–December 2024

- Experimenting to investigate the interpretation of quantifiers 'more' and 'most' to understand the algorithm humans use to determine the truth of a proposition
- Continuing weekly meetings with the experiment leader to discuss more advanced syntax and semantics literature

Undergraduate Research Assistant *Generalizations across filler-gap dependencies in LMs*

Sept. 2023–April 2024

- Leading programming efforts on research investigating how language models learn syntactic constraints and whether their generalizations align with human language understanding
- Co-authoring paper, actively participating in writing and editing processes, ensuring clarity and accuracy of technical content
- Paper selected for a talk at the 49th BU Conference on Language Development, November 2024

ADDITIONAL:

University of Maryland Dean's Scholarship

2022–2024

Secret Clearance – U.S. Department of Defense

SKILLS:

Java, C, Python, OCaml, Racket, Julia