

# Imani Finkley

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## SUMMARY

Humanities scholar with extensive research experience in using applied machine learning and data analytical methods for research in digital humanities, natural language processing, and revitalization efforts for under-resourced languages

## EDUCATION

**Cornell University** | College of Arts & Sciences | Ithaca, NY **2020-2024**  
Bachelor of Arts with Honors, Literatures in English (minors in Computer Science and Comparative Literature)  
**Honors Thesis:** “By AI: Authorship, Literature, and Large Language Models”  
**Relevant Courses:** AI Practicum; Information Retrieval; Text Mining; Language Revitalization; Data Structures & Functional Programming; Object-Oriented Programming and Data Structures; Discrete Mathematics; Linear Algebra  
**Danish Institute for Study Abroad** | Copenhagen, Denmark **Jan 2023-May 2023**  
Core Program: Game Development

## PROFESSIONAL EXPERIENCE

**Communications Assistant** | *Cornell University* | Ithaca, NY **Sep 2023-May 2024**

- Assist in development of press releases along with print, digital, and web content
- Compose monthly newsletter that communicates diversity, equity, inclusion, and belonging efforts and engagement opportunities in the Ann Bowers College of Computing and Information Sciences
- Create stories, strategies, and promotional materials for multimedia channels and social media platforms

## RESEARCH EXPERIENCE

**Literatures in English Honors Candidate** | *Cornell University* | Ithaca, NY **Aug 2023-May 2024**

- Advised by Dr. Jane Juffer and Dr. Matthew Wilkens
- Analyze history of literary canon and the tradition of authorship in discussion with literary works produced by generative AI and large language models by applying literary and media theory concepts
- Study OpenAI’s GPT 3.5 alongside university policy and social opinion concerning generative-AI authorship

**Visiting NLP Researcher** | *Johns Hopkins University* | Le Mans, France **Jun 2023-Aug 2023**

- Participant in 2023 Jelinek Summer Workshop for Speech and Language Technology (JSALT) at the Laboratoire Informatique du Mans (LIUM) in Le Mans, France
- Worked under Dr. Ehsan Variani, Dr. Lucas Ondel-Yang, and Dr. Ke Wu
- Design a PyTorch library version of the Lattice-based Speech Transducer JAX library to demonstrate the benefits of weighted finite state transducers with end-to-end pipelines with real-use speech processing applications
- Research the JAX/FLAX and PyTorch APIs to maintain comparable functionality across libraries

**Computer Vision Researcher** | *Brown University* | Providence, RI **Jun 2022-Aug 2022**

- Worked under Daniel Ritchie
- Develop machine learning model for language-based image-to-image domain translation
- Adapt image-to-image translation model architecture and pre-trained text-image embedding model

**Undergraduate Researcher** | *Brown University* | Providence, RI **Jan 2022-May 2022**

- Mentored by Dr. Srinath Sridhar in exploreCSR: Socially-Responsible AI for Computational Creativity semester-long program
- Create and process 1600-image dataset using OpenCV methods for model training, testing, and validation
- Adapt cycleGAN model architecture for image translation of video game shots to photorealistic domain

**Undergraduate Research Assistant** | *Cornell University* | Ithaca, NY (Remote) **Feb 2021-Sep 2021**

- Review, summarize, and analyze relevant literature and computational sustainable methodologies surrounding water resource management and planning to assist Patrick Reed in The Reed Research Group
- Implement an algorithm that calculates optimal policies for managing a given ecosystem and parameters

## **TEACHING & MENTORSHIP EXPERIENCE**

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**Teaching Assistant** | *Cornell University* | Ithaca, NY **Jan 2024-Present**

- Advise students in developing experiments, data collection, and implementing advanced NLP systems
- Grade projects and host biweekly 1-hour office hours for 15-student course, Advanced NLP for Humanities Research (INFO 4940)

**Underrepresented Minorities in Computing (URMC) Mentor** | *Cornell University* | Ithaca, NY **Jan 2022-Present**

- Provide tools, resources, and plans for social, academic, and professional development/opportunities for two international students in the Ann S. Bowers College of Computing and Information Sciences

**Course Consultant** | *Cornell University* | Ithaca, NY **Jan 2022-May 2022**

- Lead weekly 50-minute discussion sections to 20 students to review their understanding of discrete mathematics
- Grade homework and exams at least once a week in 2-hour sessions for a roughly 280-student course

## **LEADERSHIP EXPERIENCE**

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**Underrepresented Minorities in Computing** | Cornell University | *President* **Dec 2021-Dec 2022**

- Preside over weekly 30-person executive board, oversee the activities of standing committees, and implement technical outreach community support initiatives
- Maintain relationships with 10 existing corporate sponsors and established new relationships with 6 sponsors

**Cornell Data Science** | Cornell University | [Cornell Bias Lab](#) *Project Manager* **Sep 2022-Dec 2022**

- Create and manage project plans that align sponsor and 5-person team goals that explore identity biases with(in) machine learning and artificially intelligent systems
- Present findings on 3 commercial machine translation models in “Bias in Translation” project

## **POSTERS & PRESENTATIONS**

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**By AI: Authorship, Literature, and Large Language Models**

*Presentation* | Humanities Scholar Program Spring Research Conference | Ithaca, NY | May 3, 2024

**Literature in the Age of Mechanical Reproduction**

*Presentation* | Cornell University Department of Comparative Literature Theory Colloquium | Ithaca, NY | Feb 16, 2024

**Final: Finite State Methods with Modern Neural Architectures for Speech Applications and Beyond**

*Presentation* | Jelinek Summer Workshop for Speech and Language Technology (JSALT) | Le Mans, France | Aug 4, 2023

**Language-Based Material Manipulation for Transforming Sketches into Images**

*Poster* | Brown University Summer Research Symposium | Providence, RI | Aug 5, 2022

*Poster* | The Leadership Alliance National Conference | Hartford, Connecticut | Jul 29-31, 2022

**Realizing the Forbidden West: Translating Gameplay into Hyper-realistic Action Shots**

*Poster* | Brown University Computer Science Undergraduate Research Symposium | Providence, RI | May 5, 2022

## **AWARDS**

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**2024 Outstanding Researcher Award Honorable Mention** | Computing Research Association | December 2023

**2023 Joseph E. Connolly '72 Memorial Prize** | Cornell University | May 2023

**2022 Dean's List Award for Academic Excellence** | Cornell University | December 2022

**2022 CMD-IT/ACM Richard Tapia Conference Scholarship** | Cornell University | September 2022

**2021 Grace Hopper Celebration of Women in Computing Scholarship** | Cornell University | August 2021

## **SPECIALIZED SKILLS**

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**Programming Languages/Libraries:** Python, PyTorch, NumPy, Scikit-learn, JAX, FLAX, Java, HTML, C#, OCaml, OpenCV

**Tools/Frameworks:** GitHub, Google Collab, Jupyter Notebook, Unity, Google Cloud, Flask

**Foreign Languages:** Mandarin Chinese (Advanced Working Proficiency), Danish (Beginner Proficiency)