

# Jason Lucas

Data Sci. &amp; AI Research Scientist| PIKE Research Lab

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## EDUCATION

### THE PENNSYLVANIA STATE UNIVERSITY

PH.D. IN INFORMATICS

Data Science and AI

GPA: 3.91

Dec 2025 | University Park, PA

### ST. GEORGE'S UNIVERSITY

MASTER OF PUBLIC HEALTH

Epidemiology

GPA: 3.83

May 2021 | Grenada, WI

### BOSTON UNIVERSITY

M.Sc. IN COMPUTER INFO. SYS.

Health Informatics

GPA: 3.64

May 2014 | Boston, MA

### ST. GEORGE'S UNIVERSITY

B.Sc. IN INFORMATION TECHNOLOGY

GPA: 3.64

May 2010 | Grenada, WI

### PENN STATE LINDIV

LINGUISTICS &amp; LANGUAGE SCIENCE

Certificate

May 2025 | University Park, PA

## INTEREST

*Natural Language processing**Low-Resource Multilingual NLP**Adversarial Machine Learning**Adaptive and Alignment Tuning**Fake News generation & Detection**Large Language Model & Hallucination*

## SKILLS

### ARTIFICIAL INTELLIGENCE

NLP • ML • DL • LLM

### DATA SCIENCES

Wrangling • Exploratory

Visualization • Analytics

Scrapping • Predictive Modeling

• Adaptation Methods

### PROGRAMMING

Language:

Python • SQL • PyTorch • Java

LaTeX •

Familiar:

C++ • CSS • PHP • HTML

### TRANSFERABLE

Presentation • Project Management

Training • Science Communication

### PLATFORM

Public Health:

Epi Info • R • GeoDa • SAS

Data Science &amp; AI

VS Codes • Google Collab

IntelliJ • Github • Oracle • MSSQL

## EXPERIENCE

### THE PENNSYLVANIA STATE UNIVERSITY | GRADUATE ASSISTANT

Aug. 2021 - Present | PA, US

#### • Research Assistant

- Applying novel NLP and machine learning techniques to combat dis/misinformation across languages, contexts, and distribution gaps. under **SysFake** headed by **Dr. Dongwon Lee's** stewardship.
- Develop research direction, mentor interns, grant writing, and review conference papers
- Gained experience with Python, PyTorch, APIs (Twitter, DeepInfra, Open.AI, Transformers (Large Language Models), Deep Learning, Machine Learning, Web Scrapping, Prompt Engineering

#### • Teaching Assistant

- Responsible for conducting office hours, managing classes, coaching students, recording attendance, grading assessment, and providing written feedback.

#### • NSF NRT Fellow

- Applying **transdisciplinary research approaches** to advance human-AI interaction through **LINDIV** research traineeship.

### ST. GEORGE'S UNIVERSITY | FACULTY

June 2011 – July 2021 | Grenada, WI

#### • Instructor, Demonstrator, Adjunct Professor, Facilitator

- Served as Head of Division & Software Administrator
- Led teams, trained and coordinated across SimCapture/Examssoft platforms
- Mentored interns, supported clinical didactic and examinations
- Taught undergraduate and graduate-level courses in IT, Medicine, and Public Health
- Innovated an Online Objective Structured Clinical Examination during COVID-19.

### GOVERNMENT OF GRENADA | CERTIFIED TEACHER

Aug 2010 – Jul 2011 | Grenada, WI

#### • Managed Information Technology lab

#### • Taught Caribbean Secondary Education Certificate level Information Technology

## INTERNSHIP

05/01/2024 Interaction LLC • NLP, Intelligent Virtual Assistant, LLMs, Prompt Engineering

05/01/2023 Coalfire • Cybersecurity, security compliance and standard, SOC, PCI

02/01/2010 Flow Grenada (LIME: Cable &amp; Wireless) Networking, Mobile Tech, Database, IT Tech

## AWARD

2024 Pan-African Professional Alliance Leadership, PSU

2018 Chancellor's List for Academic Excellence, MPH

2012 Excellence and Dedication to OSCE, SGU

2010 Dean's List for Academic Excellence, B.Sc

2008 Chancellor's List for Academic Excellence, B.Sc

## FELLOWSHIP

2022-24 Linguistic Diversity Across the Lifespan, National Science Foundation.

2021-22 Funds for Excellence in Graduate Recruitment, Penn State University.

2018-20 Graduate Faculty Fellowship, St. George's University

2007-10 Undergraduate Scholarship, Government of Grenada.

## LINKS

Website:// [jasonslucas.com](https://jasonslucas.com)  
Github:// [jsl5710](https://github.com/jsl5710)  
LinkedIn:// [jsl](https://www.linkedin.com/in/jsl)  
Google Scholar:// [jasonlucas](https://scholar.google.com/citations?user=jasonlucas)

## SERVICE

Committee Member • COLING '24  
Committee Member • IST GBoR'24  
Peer Reviewer • ACL' 24  
IT Officer • Pan-African Prof. Alliance' 23  
President • Graduate Student Assc' 22.  
Outreach Coordinator • LinDiv' 22  
Volunteer • EMNLP Volunteer' 23  
Founder & Director • Fit For Life' 14  
IT Officer • Red Cross Grenada' 20

## MENTORSHIP

Lia Carin Djaouga • Millennium Scholar  
Kendall Reed II • Millennium Scholar

## TRAINING

Interdisciplinary Research • IST PSU  
Transdisciplinary Research • LinDiv  
Multilingual NLP • CLS & IST PSU  
Epidemiology • SGU  
Health Informatics • BU  
Machine & Deep Learning • IST PSU

## PUBLICATIONS

- [1] **Lucas, Jason Samuel**, Maung Maung Barani, Tabar Maryam, McBride Keegan, and Lee Dongwon. The longtail impact of generative ai on disinformation: Harmonizing dichotomous perspectives. *IEEE Intelligent Systems*, 2024.
- [2] **Lucas, Jason**, Adaku Uchendu, Michiharu Yamashita, Jooyoung Lee, Shaurya Rohatgi, and Dongwon Lee. **Fighting Fire with Fire: The Dual Role of LLMs in Crafting and Detecting Elusive Disinformation**. In Houda Bouamor, Juan Pino, and Kalika Bali, editors, *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing*, pages 14279–14305, Singapore, December 2023. **Association for Computational Linguistics**.
- [3] **Lucas, Jason**, Limeng Cui, Thai Le, and Dongwon Lee. **Detecting False Claims in Low-Resource Regions: A Case Study of Caribbean Islands**. In Tanmoy Chakraborty, Md. Shad Akhtar, Kai Shu, H. Russell Bernard, Maria Liakata, Preslav Nakov, and Aseem Srivastava, editors, *Proceedings of the Workshop on Combating Online Hostile Posts in Regional Languages during Emergency Situations*, pages 95–102, Dublin, Ireland, May 2022. **Association for Computational Linguistics**.
- [4] Maung Maung Barani, McBride Keegan, **Lucas, Jason Samuel**, Tabar Maryam, and Lee Dongwon. Generative ai disproportionately harms long tail users. *IEEE Computer*, Volume 57, Issue 11, 2024.
- [5] Dominik Macko, Robert Moro, Adaku Uchendu, **Lucas, Jason**, Michiharu Yamashita, Matúš Pikuliak, Ivan Srba, Thai Le, Dongwon Lee, Jakub Simko, and Maria Bielikova. **MULTITuDE: Large-Scale Multilingual Machine-Generated Text Detection Benchmark**. In Houda Bouamor, Juan Pino, and Kalika Bali, editors, *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing*, pages 9960–9987, Singapore, December 2023. **Association for Computational Linguistics**.
- [6] Dominik Macko, Robert Moro, Adaku Uchendu, Ivan Srba, **Lucas, Jason Samuel**, Michiharu Yamashita, Nafis Irtiza Tripto, Dongwon Lee, Jakub Simko, and Maria Bielikova. Authorship obfuscation in multilingual machine-generated text detection. *arXiv preprint arXiv:2401.07867*, 2024.

## PROJECT

**LINDIV NSF NRT | PENN STATE UNIVERSITY**

Led, collaborate,d and prototype the following research

- **BAbSANT AI for Speech Pathology**
  - I develop a conversational-AI platform to support speech-language pathology by integrating trans-disciplinary knowledge and leveraging pre-trained large language models (LLMs) like GPT-4 and Whisper. Using techniques such as in-context learning and semantic reasoning, I create a Streamlit-based application that promotes linguistic diversity and therapeutic empowerment for social good.

**INFORMATION SYSTEMS PROJECTS | ST. GEORGE'S UNIVERSITY**

Developed and championed the following projects

- **Telemedicine Virtual Hospital:**
  - I oversaw functional requirements gathering, made recommendations, piloted and tested telemedicine technology, provided training to participants, and successfully executed the go-live.
- **Online Clinical Examination Exercise:**
  - Developed and implemented the Online Clinical Evaluation Exercise (OCEx) in response to COVID-19, integrating a revamped Objective Structured Clinical Examination with in-house platforms—a global first
- **B-Line Simulation Lab Expansions:**
  - Managed B-Line Medical simulation lab expansion, collaborating with a diverse team and supporting the project manager.