

Jason Samuel Lucas

Curriculum Vitae

My research lies at the nexus of linguistics, artificial intelligence, cyber security, public health, and human language technology. Current work focuses on Natural Language Processing approaches to combat long-tail fake news with pre-trained language models and data distributions that are low-resource, imbalanced, multi-lingual, and multi-domain.

Research Interest

keywords **Natural Language Processing, Machine Learning, Deep Learning, Fake News Detection, Low-Resource Languages, Multilingualism, Linguistics Diversity & inclusion, Human Language Technology, Cyber Security, Public Health.**

Lab **PIKE**, *Penn State Information, Knowledge, and Web Research Group.*
Advisor: Prof. Dongwon Lee

Education

- 2021-25 **Ph.D. (Informatics)**, *Penn State University*, United States.
Concentration: Data Sciences and AI
- 2018-20 **MPH (Epidemiology)**, *St. George's University*, Grenada.
Capstone: Effects of Self-Care Applications in Prediabetics in Grenada: An Assessment of Compliance and Adherence with the Intervention (A Research Proposal)
- 2012-14 **M.Sc. (Computer Information Systems)**, *Boston University*, United States.
Concentration: Health Informatics
- 2007-10 **B.Sc. cum laude (Information Technology)**, *St. George's University Grenada*.
- 2005-07 **A.S. (Information Technology)**, *T.A. Marryshow Community College*, Grenada.
- 2022-24 **LINDIV Certification**, *Center for Language Science*, Penn State University, US.
Program: NSF Research Traineeship

Relevant Coursework

Informatics

- 2021 **College of Information Science & Technology**, *Penn State University*.
- *IST 557: Data Mining: Techniques and Applications*
 - *IST 510: Foundations of Computational Informatics*
 - *IST 530: Foundations of Social Informatics*
 - *IST 525: Computer-Supported Cooperative Work*
 - *LING 596: Linguistics and Language Science*

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Appointment

Academia

- 2022- **Graduate Research Assistant, Penn State University.**
- *PIKE Lab*: Penn State Information, Knowledge, and Web Research Group
 - *LINDIV*: Language Diversity Across Lifespan Graduate Research Traineeship Program
- 2021-22 **Graduate Teaching Assistant, Penn State University.**
- *IST 140*: Introduction to Application Development
 - *IST 210*: Organization of Data
- June-21 **Instructor, St. George's University, School of Medicine.**
- *PUBH 302: Public Health*, Introduction to Health Informatics
 - *BPM II: Basic Principles of Medicine*, Introduction to Biomedical Informatics
- 2011-21 **Demonstrator, St. George's University, School of Medicine.**
- *Support Clinical didactics and examination*
 - *Headed the B-Line Division*
- 2010-11 **Adjunct Assistant Professor, St. George's University, School of Arts and Science.**
- *COMP 420*: Database Systems course
- 2010-11 **Certified Teacher I, Ministry of Education, Government of Grenada.**
Caribbean Secondary Education Teacher
- 2010-11 **Facilitator, St. George's University, Department of Educational Services, Grenada.**
Undergrad tutoring and small group facilitation

Awards and Fellowships

Fellowships

- Jun-22 **Linguistic Diversity Across the Lifespan, NSF Graduate Fellowship (LinDiv).**
- Jun-22 **Black in AI, International Conference on Machine Learning Grant (AI).**
- May-22 **Diversity & Inclusion Grant, Association for Computational Linguistics (ACL).**
- Jun.-21 **Funds for Excellence in Graduate Recruitment (FEGR, Penn State University.**
- 2018-20 **Graduate Faculty Fellowship, St. George's University.**
- 2007-10 **Undergraduate St. George's University Scholarship, Government of Grenada.**

Award

- May-18 **Chancellor's List for Academic Excellence, MPH, St. George's University.**
- Jun.-12 **Excellence and Dedication to OSCE, St. George's University.**
- May-10 **Dean's List for Academic Excellence, B.Sc., St. George's University.**
- May-08 **Chancellor's List for Academic Excellence, B.Sc., St. George's University.**

Publications

Paper

1. **Jason S. Lucas, Limeng Cui, Thai Le, and Dongwon Lee .2022.,** Detecting false claims in low-resource regions: a case study of Caribbean islands. In **CONSTRAINT 2022: Second Workshop on Combating Online Hostile Posts in Regional Languages during Emergency Situation (ACL)**, pages 859–862. ACL.
 - o *Accepted*
2. **Zero-shot Cross-Lingual Transfer: Combating Multi-lingual, Multi-domain Long-tail Misinformation .**
 - o *In-development*

Services

- Aug.-22 **President**, *Graduate Student Association*, in Information Sciences and Technology.
- Aug.-22 **Outreach Coordinator**, *LinDiv*, NSF-Graduate Research Training Program.
- Jan.-15 **Director and Co-founder**, *Fit For Life*, Youth Development Program.

Professional Development

Certificate _____.

- Apr.-21 **Python programming**, *Purple Course, Python Is Easy*.
 - o Developed a two player card game called SCAT
- 2018-21 **Collaborative Institutional Training Initiative , (CITI)**.
 - o *Biomedical Human Subjects Research (IRB) Course*
 - o *Records Based Research*
 - o *Responsible Conduct of Research (RCR)*
 - o *Social and Behavioral Research Best Practices for Clinical Research*
- Feb.-20 **Global Compliance Training**, *Global conflicts of interest, global anti-bribery, global business ethics, foreign corrupt practices act and anti-money laundering*.
- Jan.-20 **Family Educational Rights and Privacy Act for Higher Education, (FERPA)**.

Conferences _____.

- Jul.-18 **International Conference on Machine Learning, (ICML)**, 2022, MD, US.
 Misinformation Counter-Measures & ML Workshop
- May-22 **Association of Computational Linguistic, (ACL)**, 2022, Dublin, Ireland.
 Paper Presentation
- Jul.-18 **Society for Simulation in Healthcare, (SSH)**, SimOps 2018, Portland, OR.
 11.5 Accredited Hours of Inter-professional Continuing Education, Registration ID: 5009
- Oct.-17 **B-Line Medical 3rd Annual Symposium**, *Laerdal Medical*, Washington, D.C.

Platforms and Skills

App. _____.

- Database ORACLE, MYSQL, MICROSOFT ACCESS, MS SQL SERVER, NETBEANS
- Platform EPI INFO, GEODA, R, PYCHARM IDE, INTELLIJ IDE, GOOGLE COLAB, GOOGLE CLOUD

Languages _____.

Programming PYTHON, SQL, L^AT_EX, CSS, PHP, HTML5, C++, JAVA

Information Systems Projects

- Sep.-10 **Telemedicine & Virtual Hospital Teaching**, St. George's University, Grenada.
Led the team that gather functional requirement and made recommendations. Appropriated, piloted, tested, and technology. Trained participants and administered go-live.
- Mar.-20 **Online Clinical Evaluation Exercise Innovation**, St. George's University, Grenada.
In response to the COVID19 pandemic, I led the team that developed, tested, piloted, trained and executed the online objective structured clinical examination. My team re-engineered OSCE exam-flow and integrated with in-house platforms, done nowhere else in the world!
- Aug.-18 **OSCE Management Improvement Project**, St. George's University, Grenada.
led the OMI requirements gathering for students, faculty, and standardized patients.. Oversee the testing and implementation of new technologies to support medical education delivery.
- Aug.-13 **B-Line Expansion phase I Project**, St. George's University, Grenada.
Led the outfitting 8 additional Clinical Examination rooms with clinical equipment, B-Line Medical equipment, and other educational supporting technologies.

References

- Ph.D Advisor** **Dongwon Lee**, Ph.D., The Pennsylvania State University.
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- Undergrad Dean** **Theodore M. Hollis**, Ph.D., Professor Emeritus, St. George's University.
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- Graduate Prof.** **Vladimir Brusic**, Ph.D., BEng(Mech), MEng(Biomed), GDip(CompSci), MApp-Sci(InfoTech), MBA, Boston University.
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- Supervisor, (Ass. Dean)** **Dolland Noel**, M.D., FACP, St. George's University.
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- Graduate Prof.** **Emanuel Keku**, M.A, MSPH, M.D., FACP, St. George's University.
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