

SACHITH ERANGA DASSANAYAKA

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EDUCATION

PhD in Mathematics, Concentration: Statistics 2017 - 2022

Texas Tech University, USA

Dissertation Topic: Artificial Intelligence Algorithms for Activity Pattern Detection in the Information Operation Networks

Advisor: Dimitri Volchenkov, PhD

Co-advisor: Ori Swed, PhD

MS in Mathematics 2017 - 2019

Texas Tech University, USA

BSc in Computer Science (Special) 2010 -2015

University of Kelaniya, Sri Lanka

Dissertation Topic: Audio Steganography for Secrete Communication.

Advisor: Hesiri Dhammika Weerasinghe, PhD

TEACHING EXPERIENCE

Department of Mathematics and Computer Science, Wittenberg University, USA

Assistant Professor of Data Science

Fall 2022-Present

- DATA 327: Statistical Modeling (3 sections)
- DATA 227: Introductory Statistics (10 sections)
- DATA 229: Introduction to Data Science (4 sections)
- DATA 380TA: Data Visualization with Python (2 sections)
- COMP 295: Introduction to Networking (1 section)
- DATA 380TA: Machine Learning with Python (1 section)

Department of Mathematics and Statistics, Texas Tech University, USA

Graduate Part-Time Instructor

Fall 2018- Spring 2022

- MATH 3342: Mathematical Statistics for Engineers and Scientists (2 sections)
- MATH 2300: Statistical Methods (6 sections)
- MATH 1451: Calculus I with Applications (1 section)
- MATH 1550: Precalculus (1 section)
- MATH 1330: Introductory Mathematical Analysis I (1 section)

PROFESSIONAL DEVELOPMENT (TEACHING)

Project NExT Fellow

August 2022-August 2023

- Selective 1-year program for new mathematics faculty aimed to help transition into full-time teaching in the stats/math/data science
- Attended 3 consecutive Mathfest meetings and the Joint Math Meetings; participated in workshops prior to each meeting specifically for Red cohort Fellows
- Focused on improving the teaching and learning of statistics and data science, developing an individual research program, becoming involved at the university and national levels, and search grants for small scale researches
- Provided a network of peers and mentors throughout the country

SIAM Project NExT Fellow

August 2022-August 2023

- Selective 1-year fellowship for new two Project NExT Fellows aimed to help transition into full-time teaching in the mathematical sciences and build connections among SIAM members. [_WebLink](#)

Inaugural Digital Liberal Arts Summer Institute

June 2023

- One of 15 faculty members from liberal arts colleges around the country to be selected to attend the inaugural Digital Liberal Arts Summer Institute sponsored by Transylvania University's Bingham Program for Excellence in Teaching. [_WebLink](#)

CERTIFICATIONS

- Oracle Cloud Infrastructure 2025 Certified Data Science Professional (Issued by: Oracle University) October 2025

PROFESSIONAL QUALIFICATION

- Machine Learning with Python (Issued by: Coursera, Authorized by: IBM) 2022
- Python for Data Science and AI course (Issued by: Coursera, Authorized by: IBM) 2022
- Diploma in Windows Network Administration 2013
- Certificate Course in Web Designing, University of Kelaniya, Sri Lanka 2013

OTHER PROFESSIONAL EXPERIENCES

- Quality Assurance Engineer April 2015 - April 2017
SimCentric Technologies (Pvt) LTD, Colombo, Sri Lanka
- Temporary Demonstrator February 2015 - April 2015
University of Kelaniya, Sri Lanka
- Internship January 2014 - June 2014
Sri Lanka Telecom PLC, Colombo 01, Sri Lanka

PROFESSIONAL MEMBERSHIPS

- Mathematical Association of America (MAA)
- American Statistical Association (ASA)

- Society for Industrial and Applied Mathematics (SIAM)

REFEREED PUBLICATIONS

J. M. Thilini Jayasinghe, Sachith Dassanayaka. “Detecting deception: employing deep neural networks for fraudulent review detection on Amazon,” *Neural Computing & Applications* (2025) doi.org/10.1007/s00521-025-11485-y.

Ori Swed, Sachith Dassanayaka, and Dimitri Volchenkov. “Keeping it authentic: the social footprint of the trolls’ network,” *Social Network Analysis and Mining* 14(38) (2024) DOI:10.1007/s13278-023-01161-1.

Sachith Dassanayaka, Ori Swed, and Dimitri Volchenkov. “Mapping the Russian Internet Troll Network on Twitter using a Predictive Model,” *Journal of Vibration Testing and System Dynamics* 7(2) (2023) 113–128, DOI:10.5890/JVTSD.2023.06.001.

Eranga, D. M. S., and Hesiri D. Weerasinghe. “Audio transporters for unrevealed communication.” In *2015 Fifteenth International Conference on Advances in ICT for Emerging Regions (ICTer)*, IEEE(2015) pp. 267, 10.1109/ICTER.2015.7377700

PAPERS SUBMITTED OR UNDER REVIEW

Sachith Dassanayaka, and J. M. Thilini Jayasinghe. “Beyond the Five Stars: Leveraging Deep Learning to Detect Sophisticated Review Fraud on Amazon using Nod2Vec,” *Journal of Neural Computing & Applications*.

Sachith Dassanayaka, and Ori Swed. “Cross-Platform Behavioral Analysis of Troll Networks: Mapping Disinformation Strategies Across Social Media and State-Sponsored Channels,” *Journal of Computational Social Science*.

PRESENTATIONS AND POSTERS AT PROFESSIONAL MEETINGS

A Text-Based Classification to Escalate the Predictability of Fake Tweet Actors in Troll Network
October, 2024
SIAM Conference on Mathematics of Data Science (MDS24)

Creating a Framework to Classify Actors and Expose Misleading Identifications in Russian Troll Networks on Twitter through Natural Language Processing
January, 2024
Joint Mathematics Meeting

Classifying Twitter’s Russian Trolls via Machine Learning
August, 2023
MathFest

A Model to differentiate Actors in order to Uncover the Artificial Legitimacy of the Russian Information Operation Networks
April, 2022
Joint Mathematics Meeting

Identify the actors in the Russian Information Operation Networks and Three-Dimensional Geometric Visualization of Activities
February, 2022
American Statistical Association Conference on Statistical Practice

Mapping the Russian Information Operation Networks to a Neural Network predictive model
January, 2022
The Southern Political Science Association Annual Meeting 2022

Uncover the Hidden Activity Patterns and Differentiate Fake Personas of the Russian Troll Networks via a Machine Learning Model November, 2021
2nd Waterloo Student Conference of Statistics, Actuarial Science and Finance, University of Waterloo, Canada

Classifying the Actors of the Information Operation Networks through a Machine Learning Technique November, 2021
The 4th Annual Meeting of the SIAM Texas-Louisiana Section, University of Texas Rio Grande Valley, USA

Poster: A Machine Learning Technique to Categorize the Russian Information Operation Networks October, 2021
Conference of Texas Statisticians (Virtual), Texas Tech University, USA

Using a Predictive Model to Map the Russian Information Operation Networks September, 2021
17th Applied Statistics 2021 conference (Virtual), Statistical Society of Slovenia, Slovenia

Revealing the Russian Information Operation Networks structure using a predictive model September, 2021
The 44th SIAM Southeastern Atlantic Section Conference, Auburn University, USA

Two Tier Shield Unapparent Information Deliver along with the Visual Streams November, 2016
Kelaniya International Conference on Advances in Computing and Technology, Sri Lanka

Conceal Communication via MP3 December, 2015
International Postgraduate Research Conference, Sri Lanka

Poster: Audio Transporters for Unrevealed Communication August, 2015
15th IEEE International Conference on Advances in ICT for Emerging Regions, Sri Lanka

OTHER PRESENTATIONS

Creating a Framework to Classify Actors in Russian Troll Network on Twitter through Language Processing November, 2025
Department of Mathematics and Computer Science Colloquium
Central State University, Wilberforce, OH

How Machine Learning Supports Us in Understanding the Structure of the Trolls on Twitter January, 2023
Department of Math and Computer Science Colloquium
Wittenberg University, Springfield, OH

Can Machine Learning Assist Us in Understanding the Structure of the Russian Troll Network on Twitter? November, 2022
Ronneberg Lecture Series, Denison University, OH

AWARDS AND SCHOLARSHIPS

- SIAM Early Career Travel Award for SIAM Conference on Mathematics of Data Science (MDS24) 2024
- SIAM Early Career Travel Award for Joint Mathematics Meeting 2024 2024

- Early Graduation Scholarship, Texas Tech University Summer 2022
- Hildebrand Scholarship, Texas Tech University Summer 2022
- Study Abroad Competitive Scholarship, Texas Tech University Spring 2020 to Spring 2022
- Prestage-Cook Travel Award from the Southern Political Science Association (SPSA) 2022
- Travel support from the 4th Annual Meeting of the SIAM Texas-Louisiana Section (TXLA) 2021
- Travel support from the SIAM Southeastern Atlantic Section Conference (SIAM-SEAS) 2021
- Travel support from the Graduate School, Texas Tech University 2021
- Special recognition from Rawls Information Security Association (RISA), Texas Tech University 2018

RESEARCH EXPERIENCE

Research Interest

- Natural Language Processing (NLP)
- Machine Learning and deep Neural Network Models
- Data Visualization
- Machine Intelligence
- Computer Security (Cryptography and Steganography)
- Design thinking and technology for undergraduate Statistics and Data Science

UNDERGRADUATE RESEARCH PROJECTS

- Zach Rust '26, Pitch Prediction Using Multimodal Learning with Grip Image and Kinematic Data, Advisor(Hon's Thesis)
- Ian L. Potter '27, Develop a predictive model using Natural Language Processing(NLP) for a fake review datasets, Advisor(FYRA)
- Hillary Hamburger '26, Develop a predictive model for IMDB-rated datasets, Advisor(FYRA)

UNDERGRADUATE INDEPENDENT STUDY

- Dominic J. Cork '24, Analyzing and building predictive models for misinformation campaigns on Tweets via Machine Learning
- Matthew D. Rogers '24, Analyzing a NLF football dataset by applying regression
- Meghan Lythgoe '23, Analyzing Tweets via Natural Language Processing

WORKSHOPS,WEBINARS, AND CONFERENCE ATTENDED

- Joint Mathematics Meetings

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| San Francisco, CA | January 03-06, 2024 |
| • MathFest | |
| Tampa, FL | August 02-06, 2023 |
| Philadelphia, PA | August 03-06, 2022 |
| • Joint Mathematics Meetings | |
| Boston, MA | January 04-07, 2023 |
| • Symposium on Teaching Statistics, American Statistical Association, New York City Metro Area Chapter | November 02, 2021 |
| Virtual event | |
| • Big Data and AI 2021, Virtual event for data and analytics professionals (AI, Big Data, Cloud, Cybersecurity), Toronto | October 13-14, 2021 |
| Virtual event | |
| • VMworld 2021, Multi-Cloud Online event around the globe | October 5-7, 2021 |
| Virtual event | |
| • Building an Open, Petabyte-Scale Data Platform With Databricks | September 29, 2021 |
| Webinar Talk | |
| • Open Data Science Conference APAC 2021 | September 15-16, 2021 |
| Virtual Conference | |
| • 2nd annual workshop on Knowledge Guided Machine Learning | August 9-11, 2021 |
| Webinar Talk | |
| • Deployment Of Hybrid Cloud Machine Learning Workloads Using VMware Cloud Foundation with Tanzu | January 28, 2021 |
| Webcast | |
| • Scientific Computing Meets Machine Learning and Life Sciences | October 7-9, 2019 |
| Texas Tech University | |

NEW TOPIC COURSES DESIGNED

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| DATA 380TA: Machine Learning with Python | Fall, 2024 |
| DATA 380TA: Data Visualization with Python | Fall, 2023 |

CONTRIBUTIONS TO THE UNIVERSITY

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| • Committee member of the Honor Council | Fall 2024-Present |
| Wittenberg University, Springfield, OH | |
| • Committee member of the BA in international business | Spring 2023-Present |
| Wittenberg University, Springfield, OH | |
| • Search Committee for Computer Science Tenure-Track Position | Fall 2022 |
| Wittenberg University, Springfield, OH | |

CONTRIBUTIONS TO THE STATISTICS/DATA SCIENCE COMMUNITY

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| • Reviewer: Misinformation Review by Harvard Kennedy School | 2023 to present |
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- Reviewer: International Journal of Data Science and Analysis 2025 to present
- Reviewer: Mechanisms of Ageing and Development journal 2025 to present
- Technical Program Committee of the 10th International Conference on Advances in Technology and Computing (ICATC 2025),
University of Kelaniya, Sri Lanka
- Reviewer: International Conference on Applied and Pure Sciences, Sri Lanka (ICAPS) 2024
- Reviewer: Undergraduate Statistics Project Competition (USPROC) Fall 2024, Fall 2025
- Reviewer: The Applied Science Business and Industrial Research Symposium, Sri Lanka (ASBIRES) 2024

TECHNICAL SKILLS

- Cisco Router and Switch (layer3 and layer2) configuration
- Strong knowledge and experience in software Quality Assurance
- Virtual Machine Software: VirtualBox and VMware Workstation Player
- Web Developing