Sampath Jayarathna

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Research Interests
Eye Tracking, Data Science and Analytics, Human-Computer Interaction, Applied Machine Learning

Education
2016	Ph.D., Computer Science, Texas A&M University, College Station, TX
	Dissertation: Unified Relevance Feedback for Multi-Application Interest Modeling
	Committee: Frank Shipman (chair), Richard Furuta, James Caverlee, Ann McNamara
2010	M.S., Computer Science, Texas State University, San Marcos, TX
	Thesis: Two-Dimensional Oculomotor Plant Mechanical Model
	Advisor: Oleg Komogortsev
2006	B.S., Computer Science, University of Peradeniya, Sri Lanka
	Honors Thesis: Offline Handwritten Connected Character Segmentation
	Award: First Class Honors, University Award for Academic Excellence

Publications (*With Student Co-Authors)

Peer Reviewed Book Chapters
1. (IGI-Global) Anne Michalek, *Gavindya Jayawardena, and Sampath Jayarathna. "Predicting ADHD using Eye Gaze Metrics Indexing Working Memory Capacity", Computational Models for Biomedical Reasoning and Problem Solving, IGI Global, pp. 66-88. 2019
2. (IGI-Global) Sampath Jayarathna, *Yasith Jayawardana, Mark Jaime, and *Sashi Thapaliya. "Electroencephalogram (EEG) for Delineating Objective Measure of Autism Spectrum Disorder", Computational Models for Biomedical Reasoning and Problem Solving, IGI Global, pp. 34-65. 2019

Peer Reviewed Journals
3. (Frontiers) *Bhanuka Mahanama1, *Yasith Jayawardana, *Sundararaman Rengarajan, *Gavindya Jayawardena, Leanne Chukoskie, Joseph Snider, and Sampath Jayarathna. "Eye Movement and Pupil Measures", Frontiers in Human-Media Interaction, 2021
4. (Elsevier MLWA) *Salim Sazzed, and Sampath Jayarathna. "SSentiA: A Self-supervised Sentiment Analyzer for Classification from Unlabeled Data", Machine Learning with Applications, 4(1), 2021, Impact Factor: 6.954
5. (IGI-Global IJMDEM) *Gavindya Jayawardena, and Sampath Jayarathna. "Automated Filtering of Eye Movements using Dynamic AOI in Multiple Granularity Levels", International Journal of Multimedia Data Engineering and Management, 12(1), pp. 49-64, 2021 [Invited Journal Paper - IEEE IRI 2020], Impact Factor: 0.73
6. (Springer IJAC) *Gangani Ariyarathne, *Senuri De Silva, *Sanuwani Dayarathna, Dulani Meedeniya, Sampath Jayarathna, and Anne Michalek. "Computational Decision Support System for ADHD Identification", International Journal of Automation and Computing, 2020, Impact Factor: 2.29
7. (Springer IJAC) *Dilantha Haputhanthri, *Gunavaran Brihadiswaran, *Sahan Gunathilaka, Dulani Meedeniya, Sampath Jayarathna, Mark Jaime, and Christopher Harshaw. "Integration of Facial Thermography in EEG-based Classification of ASD", International Journal of Automation and Computing, 2020, Impact Factor: 2.29
8. (IGI-Global IJEHMC) *Senuri De Silva, *Sanuwani Dayarathna, *Gangani Ariyarathne, Dulani Meedeniya, and Sampath Jayarathna. "fMRI Feature Extraction Model for ADHD Classification Using Convolutional Neural Network", International Journal of E-Health and Medical Communications, 2020, Impact Factor: 0.57
9. (ACM CSUR) *Vijini Mallawaarachchi, *Lakmal Meegahapola, *Roshan Alwis, *Eranga Nimalarathna, Dulani Meedeniya, and Sampath Jayarathna. "Change Detection and Notification of Webpages: A Survey", ACM Computing Surveys , Vol 53 (1), pp. 1-35, 2020, Impact Factor: 7.99

10. (IJCS) *Gunavaran Brihadiswaran, *Dilantha Haputhanthri, *Sahan Gunathilaka, Dulani Meedeniya, and Sampath Jayarathna. "EEG-based Processing and Classification Methodologies for Autism Spectrum Disorder", International Journal of Computer Science, Vol. 15(8), pp. 1161-1183, 2019, SJR: 0.30

11. (iJOE) *Senuri De Silva, *Sanuwani Dayarathna, *Gangani Ariyarathne, Dulani Meedeniya, and Sampath Jayarathna. "A Survey of Attention Deficit Hyperactivity Disorder Identification Using Psychophysiological Data", International Journal of Online and Biomedical Engineering, Vol. 15(13), pp. 61-76, 2019, SJR: 0.30

12. (ACM TAP) Oleg Komogortsev, Corey Holland, Sampath Jayarathna, Alex Karpov. "2D Linear Oculomotor Plant Mathematical Model: Verification and Biometric Applications", ACM Transactions on Applied Perception (TAP), Vol. 10(4), 2014.

13. (IEEE TBE) Oleg Komogortsev, Denise Gobert, Sampath Jayarathna, Do Hyong Koh and Sandeep Gowda. "Standardization of Automated Analysis of Oculomotor Fixation and Saccadic Behaviors ". IEEE Transactions on Biomedical Engineering. Vol. 57(11), pp. 2635-2645, 2010

Peer Reviewed Conference Papers

14. (ACM IUI) *Md Javedul Ferdous, Hae-Na Lee, Sampath Jayarathna, and Vikas Ashok, "InSupport: Proxy Interface for Enabling Efficient Non-Visual Interaction with Web Data Records", 27th ACM Conference on Intelligent User Interfaces, 2022

15. (ACM DocEng) *Yasith Jayawardana, *Gavindya Jayawardena, Andrew Duchowski, and Sampath Jayarathna, "Metadata-Driven Eye Tracking for Real-Time Applications", 21st ACM Symposium on Document Engineering, 2021

16. (IEEE IRI) *Gavindya Jayawardena and Sampath Jayarathna, "Automated Filtering of Eye Gaze Metrics from Dynamic Areas of Interest" Proceedings of the 21st IEEE International Conference on Information Reuse and Integration for Data Science (IRI), Las Vegas, NV, USA, pp. 67-74, 2020

17. (AH) *Bhanuka Mahanama, *Yasith Jayawardana, and Sampath Jayarathna, "Gaze-Net: Appearance-Based Gaze Estimation using Capsule Networks", 11th Augmented Human International Conference, 2020

18. (ACM ETRA) *Gavindya Jayawardena, Anne Michalek, and Sampath Jayarathna, "Pilot Study of Audiovisual Speech-In-Noise (SIN) Performance of Young Adults with ADHD", 12th ACM Symposium on Eye Tracking Research and Applications, 2020

19. (ICSCA) *Gangani Ariyarathne, *Senuri De Silva, *Sanuwani Dayarathna, Dulani Meedeniya, and Sampath Jayarathna. "ADHD Identification using Convolutional Neural Network with Seed-based Approach for fMRI Data", 9th International Conference on Software and Computer Applications, Langkawi, Malaysia, pp. 31-35, Feb 18-21, 2020

20. (IEEE IRI) *Bathsheba Farrow, and Sampath Jayarathna, "Technological Advancements in Post-Traumatic Stress Disorder Detection: A Survey", In Proceedings of the IEEE 20th International Conference on Information Reuse and Integration for Data Science , Los Angeles, CA, July 31-August 3, pp. 223-228, 2019

21. (IEEE IRI) *Gavindya Jayawardena, Anne Michalek, and Sampath Jayarathna, "Eye Tracking Area of Interest in the Context of Working Memory Capacity Tasks", In Proceedings of the IEEE 20th International Conference on Information Reuse and Integration for Data Science , Los Angeles, CA, July 31-August 3, pp. 208-215, 2019

22. (IEEE IRI) *Salim Sazzed, and Sampath Jayarathna, "A Sentiment Classification in Bengali and Machine Translated English Corpus", In Proceedings of the IEEE 20th International Conference on Information Reuse and Integration for Data Science , Los Angeles, CA, July 31-August 3, pp. 107-114, 2019.

23. (IEEE IRI) *Yasith Jayawardana, Mark Jaime, and Sampath Jayarathna, "Analysis of Temporal Relationships between ASD and Brain Activity through EEG and Machine Learning", In Proceedings of the IEEE 20th International Conference on Information Reuse and Integration for Data Science , Los Angeles, CA, July 31-August 3, pp. 151-158, 2019. (Best Student Paper award)

24. (IEEE MERCon) *Senuri De Silva, *Sanuwani Dayarathna, *Gangani Ariyarathne, Dulani Meedeniya, Sampath Jayarathna, Anne Michalek, and *Gavindya Jayawardena. "A Rule-Based System for ADHD Identification using Eye Movement Data", In Proceedings of the 5th International Multidisciplinary Engineering Research Conference, Moratuwa, Sri Lanka, pp. 538-543, July 3-5, 2019. (Best Paper award)

25. (IEEE MERCon) *Dilantha Haputhanthri, *Gunavaran Brihadiswaran, *Sahan Gunathilaka, Dulani Meedeniya, Yasith Jayawardana, Sampath Jayarathna, and Mark Jaime. "An EEG based Channel Optimized Classification Approach for Autism Spectrum Disorder", In Proceedings of the 5th International Multidisciplinary Engineering Research Conference, Moratuwa, Sri Lanka, pp. 123-128, July 3-5, 2019

26. (IEEE IRI) *Diana Lin, and Sampath Jayarathna. "Automated Playlist Generation from Personal Music Libraries". IEEE 19th International Conference on Information Reuse and Integration and Data Science, Salt Lake City, Utah, 2018

27. (IEEE IRI) *Tannaz Damavandi, Sampath Jayarathna, and Yu Sun. "Modeling CDC Data for Real Time Feature Estimation". IEEE 19th International Conference on Information Reuse and Integration and Data Science, Salt Lake City, Utah, 2018

28. (IEEE IRI) *Sobiga Shanmugathasan, and Sampath Jayarathna. "Oculomotor Plant Feature Extraction from Human Saccadic Eye Movements". IEEE 19th International Conference on Information Reuse and Integration and Data Science, Salt Lake City, Utah, 2018

29. (JCDL) Sampath Jayarathna, and *Sobiga Shanmugathasan. "Evaluating Saccade-bounded Eye Movement Features for the User Interest Modeling". Proceedings of ACM & IEEE Joint Conference on Digital Libraries, Fort Worth, Tx, 2018

30. (IEEE IRI) Sampath Jayarathna, and Frank Shipman. "Analysis and Modeling of Unified User Interests", IEEE 18th International Conference on Information Reuse and Integration, San Diego, CA, 2017

31. (ICSCA) *Lakmal Meegahapola, *Roshan Alwis, *Eranga Nimalarathna, *Vijini Mallawaarachchi, Dulani Meedeniya, and Sampath Jayarathna. " Random Forest Classifier based Scheduler Optimization for Search Engine Web Crawlers", 7th International Conference on Software and Computer Applications, Malaysia, 2017

32. (ICTer) *Lakmal Meegahapola, *Roshan Alwis, *Eranga Nimalarathna, *Vijini Mallawaarachchi, Dulani Meedeniya, and Sampath Jayarathna. " Detection of Change Frequency in Web Pages to Optimize Server-based Scheduling", 17th International Conference on Advances in ICT for Engineering Regions, Colombo, Sri Lanka, 2017

33. (IEEE INTECH) *Lakmal Meegahapola, *Roshan Alwis, *Eranga Nimalarathna, *Vijini Mallawaarachchi , Dulani Meedeniya, and Sampath Jayarathna." Adaptive Technique for Web Page Change Detection using Multi-threaded Crawlers", IEEE 7th International Conference on Innovative Computing Technology, Luton, UK, 2017.

34. (IEEE SNPD) *Lakmal Meegahapola, *Roshan Alwis, *Eranga Nimalarathna, *Vijini Mallawaarachchi , Dulani Meedeniya, and Sampath Jayarathna, "Optimizing Change Detection in Distributed Digital Collections",18th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing, Ishikawa, Japan, 2017.

35. (MerCon) *Lakmal Meegahapola, *Roshan Alwis, *Eranga Nimalarathna, *Vijini Mallawaarachchi, Dulani Meedeniya, and Sampath Jayarathna, "Optimizing Change Detection in Frequently Changing Webpages", 3rd International Multidisciplinary Engineering Research Conference, Sri Lanka, 2017.

36. (ACM HT) Luis Meneses, Sampath Jayarathna, Richard Furuta, Frank Shipman. "Analyzing the Perceptions of Change in a Distributed Collection of Web Documents". The ACM Hypertext Conference, Halifax, Canada, pp.273-278, 2016

37. (ACM CHIIR) Sampath Jayarathna, and Frank Shipman. "Rationale and Architecture for Incorporating Human Oculomotor Plant Features in User Interest Modeling", ACM SIGIR Conference on Human Information Interaction and Retrieval, Chapel Hill, pp.281-284, 2016

38. (JCDL) Sampath Jayarathna, Atish Patra, Frank Shipman. "Unified Feedback for Multi-Application User Interest Modeling". Proceedings of ACM & IEEE Joint Conference on Digital Libraries, Knoxville, TN, 2015. (Nominated for Best Student Paper award)

39. (JCDL) Luis Meneses, Sampath Jayarathna, Richard Furuta, Frank Shipman. "Grading Degradation in an Institutionally Managed Repository". Proceedings of ACM & IEEE Joint Conference on Digital Libraries, Knoxville, TN, 2015.

40. (SKG) Zhou Zhurong, Sampath Jayarathna, Atish Patra, and Frank Shipman. "IPM-G: Enabling Collaborative Filtering Using Multi-Application Interest Models", In Proceedings of Semantics, Knowledge and Grids, Beijing, CH, 2014.

41. (ACM ETRA) Oleg Komogortsev, Sampath Jayarathna, Cecilia Aragon, and Mahmoud Mechehoul. "Biometric Identification via an Oculomotor Plant Mathematical Model" ACM Eye-Tracking Research & Applications Symposium, Austin, 2010.

42. (ACM ETRA) Oleg Komogortsev, Sampath Jayarathna, Do Hyong Koh, and Sandeep Gowda. "Qualitative and Quantitative Scoring and Evaluation of the Eye Movement Classification Algorithms". Eye-Tracking Research & Applications, Austin, 2010.

43. (IEEE BIBE) Oleg Komogortsev and Sampath Jayarathna, "2D Oculomotor Plant Mathematical Model for Eye Movement Simulation". In proceedings of the 8th International Conference on Bioinformatics and Bioengineering, Athens, Greece, 2008.
44. (IEEE CIMCA) Sampath Jayarathna and G.E.M.D.C. Bandara. "Junction Based Segmentation Algorithms for Offline Handwritten Connected Character Segmentation ". In proceedings of the International Conference on Computational Intelligence for Modeling Control and Automation, pp. 147-147, Sydney, Australia, 2006.
45. (IEEE ICIIS) Sampath Jayarathna and G.E.M.D.C. Bandara. "New Segmentation Algorithm for Offline Handwritten Connected Character Segmentation". In Proceedings of the First International Conference on Industrial and Information Systems. Peradeniya, Sri Lanka, pp. 540-546, 2006.

Peer Reviewed Workshop and Poster Papers
46. (ACM BCB) *Bathsheba Farrow, and Sampath Jayarathna. "Visual Pipeline Modeling in NeuroPype for EEG Data Analysis", The 12th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics, 2021. (in press) [Conference]
47. (ACM BCB) *Bathsheba Farrow, and Sampath Jayarathna. "Sentiment Analysis of Social Media Posts for Mental Health Assessments", The 12th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics, 2021. (in press) [Conference]
48. (ACM/IEEE JCDL) *Bhanuka Mahanama, *Gavindya Jayawardena, and Sampath Jayarathna. "Analyzing Unconstrained Reading Patterns of Digital Documents Using Eye Tracking", Proceedings of the 21st ACM/IEEE-CS Joint Conference on Digital Libraries, 2021. (Best Poster Award) [Conference]
49. (Big Data CAS) *Yasith Jayawardana, *Alexander C. Nwala, *Gavindya Jayawardena, Jian Wu, Sampath Jayarathna, Michael Nelson, C. Lee Giles. "Modeling Updates of Scholarly Webpages Using Archived Data", BigData'20 Computational Archival Science, 2020. [Workshop]
50. (ACM/IEEE JCDL) *Yasith Jayawardana, and Sampath Jayarathna. "Streaming Analytics and Workflow Automation for DFS", Proceedings of the 20th ACM/IEEE-CS Joint Conference on Digital Libraries, Wuhan, Hubei, P. R. China, 2020. (Best Poster Award Honorable Mention) [Conference]
51. (ACM/IEEE JCDL) *Gavindya Jayawardena, Sampath Jayarathna,and Jian Wu. "Analyzing the Effect of Reading Patterns using Eye Tracking Measures", Proceedings of the 20th ACM/IEEE-CS Joint Conference on Digital Libraries, Wuhan, Hubei, P. R. China, 2020. (Best Poster Award) [Conference]
52. (JCDL) *Yasith Jayawardana, and Sampath Jayarathna. "DFS: A Dataset File System for Data Discovering Users", In Proceedings of the 19th ACM/IEEE-CS Joint Conference on Digital Libraries, Urbana-Champaign, Illinois, June 2-6, pp. 355-356, 2019. [Conference]
53. (IEEE Big Data) *Sashi Thapaliya, Sampath Jayarathna, and Mark Jaime. "Evaluating the EEG and Eye Movements for Autism Spectrum Disorder". IEEE Big Data Conference Special Session on Intelligent Data Mining, 2018. [Conference]
54. (ACM Tapia) *Nada Alghofaili, *Joanna Cao, and Sampath Jayarathna. "Persona Generation for Human Trafficking Victims". ACM Richard Tapia Celebration of Diversity in Computing, Orlando, FL, 2018. [Conference]
55. (IEEE Big Data) Sampath Jayarathna. , and *Faryaneh Poursardar, "Change Detection and Classification of Digital Collections". IEEE Big Data Conference Special Session on Intelligent Data Mining, 2016. [Conference]
56. (IEEE VIS) Rhema Linder, Alyssa Pena, Sampath Jayarathna and Eric Ragan. "Results and Challenges in Visualizing Analytic Provenance of Text Analysis Tasks Using Interaction Logs", Logging Interactive Visualizations and Visualizing Interaction Logs (LIVVIL) Workshop at IEEE VIS, Baltimore, MD, 2016. [workshop]
57. (WADL) Luis Meneses, Sampath Jayarathna, Richard Furuta, Frank Shipman. "Grading Degradation in an Institutionally Managed Repository". Workshop of Web Archiving and Digital Libraries Knoxville, TN, 2015. [workshop]
58. (JCDL) Sampath Jayarathna "Unifying Implicit and Explicit Feedback for Multi-Application User Interest Modeling". ACM & IEEE Joint Conference on Digital Libraries, Knoxville, TN, 2015. [Doctoral Consortium]
59. (ACM CIKM) Sampath Jayarathna, Atish Patra, and Frank Shipman. "Mining User Interest from Search Tasks and Annotations", 22nd ACM Conference on Information and Knowledge Management, Burlingame, CA, 2013. [Conference]

Non-Peer Reviewed Publications

1. Jessie Uyan, Irvin Cruz, Sampath Jayarathna. "Eye Tracking Data Analysis and Its Applications". 4th Annual Creative Activities and Research Symposium, Cal Poly Pomona, 2018. (Poster)

2. Waleed Karim, Ricky Kim, Sampath Jayarathna, Atish Patra, Frank Shipman. "Facial Privacy in Digital Age". 3rd Annual Creative Activities and Research Symposium, Cal Poly Pomona, 2017. (Poster)

3. Sampath Jayarathna, Frank Shipman. "Improving Web Search by Incorporating User Behavior in Everyday Applications", Industrial Affiliates Program (IAP), (Won Best Poster 2nd place)
   Student Research Week, Texas A&M University, (Won Best Poster 1st Place)

4. Sampath Jayarathna, Luis Meneses, Richard Furuta, Frank Shipman. "Bringing Order to the Web: Categorizing Changes in a Digital Repository". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, April 20 ,2015 (Poster)

5. Sampath Jayarathna, Atish Patra, Frank Shipman. "Learning Topic Models for Multi-Application User Interest Modeling". Jan 15, 2014 (Technical Report)

6. Sampath Jayarathna, Frank Shipman. "You might also like…" from Everyday Application to Recommendations. Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, Sep. 09 ,2014 (Poster) (Won Best Poster Award 3rd place)

7. Sampath Jayarathna, Atish Patra, Frank Shipman. "Unified Feedback for Multi-Application User Interest Modeling". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, April 24 ,2014 (Poster)

8. Sampath Jayarathna, Atish Patra, Frank Shipman. "Mining Explicit Feedback for Multi-Application user Interest Modeling". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, Sep. 10 ,2013 (Poster)

9. Atish, Patra, Sampath Jayarathna, Frank Shipman. "Learning Weights using Multi-Layer Perceptron in User Interest Modeling". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, Sep. 10 ,2013 (Poster)

10. Sampath Jayarathna, Atish Patra, Frank Shipman. "UIMaP: Mining Short-Term User Interest from Personalized Triage Tasks". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, March 05 ,2013 [Poster]

11. Sampath Jayarathna, Frank Shipman. "Hybrid (Statistical and Knowledge-based) Multi-Application User Interest Modeling". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, Sep. 11-12, 2012 (Poster)

12. Oleg Komogortsev, Corey Holland, and Sampath Jayarathna, "Two-Dimensional Homeomorphic Oculomotor Plant Mathematical Model". 2012. (Technical Report)

13. Sampath Jayarathna, Frank Shipman. "CNS: A Task-based Hybrid Collaborative Filtering Recommender Service". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, March. 06 ,2012 (Poster)(Best Poster Award - 3rd place)

14. Sampath Jayarathna, Frank Shipman. "CNS: NSDL Service to Support Personalized & Community-Oriented Navigation". Industrial Affiliates Program (IAP), CSE, Texas A&M University, College Station, Texas, Sep. 13-14,2011 (Poster)

15. Mahmoud Mechehoul, Sampath Jayarathna, Oleg V. Komogortsev. "Statistical Approach to Person Identification via Unique Properties of the Oculomotor Plant", eCommons@Texas State University, Paper20, 2010 (Technical Report)

16. Sampath Jayarathna, Oleg Komogortsev, Cecilia Aragon, and Mahmouod Mechehoul. "Oculomotor Plant Biometric: Person Specific Features in Eye Movements". 2009 Sigma Xi International Research Conference, The Woodlands, Texas, Nov 12-15, (Poster)

17. Sampath Jayarathna, Oleg Komogortsev, Cecilia Aragon, and Mahmouod Mechehoul. "Oculomotor Plant Biometric Identification". International Research Conference for Graduate Students, Texas State University, San Marcos, Texas, Nov 4-5, 2009 (Abstract)

18. Oleg Komogortsev, Sampath Jayarathna, Cecilia Aragon, and Mahmouod Mechehoul. "Biometric Identification via an Oculomotor Plant Mathematical Model". eCommons@Texas State University, Paper 16 , 2009 (Technical Report)

19. Oleg Komogortsev, Sampath Jayarathna, Sandeep Gowda, and Do Hyong Koh. "Qualitative and Quantitative Scoring and Evaluation of the Eye Movement Classification Algorithms". eCommons@Texas State University, Paper 15 , 2009 [Technical Report]

20. Oleg Komogortsev and Sampath Jayarathna, "Classification Algorithms for Saccade-related Oculomotor Plant Matrices". TR2009-05-31, May 31st 2009 (Technical Report)

21. Oleg Komogortsev and Sampath Jayarathna, "2D Oculomotor Plant Mathematical Model Equations". TR2008-05-30, May 30th 2008 (Technical Report)

Invited Talks and Panels
1. Keynote, "Advancements in Gaze-based Interactions", International Conference on Advances in Technology and Computing, December 18, 2021
2. Invited Talk, "Data Science and Analytics during Gaze-based Interactions" Data Science Seminar, Old Dominion University, Fall 2021
3. Panelist, "NSF CAREER Workshop", Old Dominion University, Fall 2021
4. Invited Talk, "Professional Identity and Your Resume/CV", CS800, Old Dominion University, Spring 2021
5. Invited Talk, "Neuro-Information Retrieval and Beyond", University of Peradeniya, Sri Lanka, Spring 2021
6. Panelist, REYES: Remote Experience for Young Engineers and Scientists, Old Dominion University, July 02, 2020
7. Invited Talk, "ACM-W Resume Workshop", ACM-W, Old Dominion University, 2020
8. Invited Talk, "Multi-Modal Sensing with Neuro-Information Retrieval". NASA Langley, 2019
9. Invited Talk, "Multi-Modal Sensing with Neuro-Information Retrieval". MITRE Corp., 2019
10. Invited Talk, "The Human, the Eye and the Brain: User Behavior Data Analytics: Unifying Relevance Feedback for User Modeling". Inaugural Science Friday-Wine & Cheese, Old Dominion University, 2018
11. Invited Talk, "The Human, the Eye and the Brain: User Behavior Data Analytics: Unifying Relevance Feedback for User Modeling". Computer Science Colloquium, Old Dominion University, 2018
12. Invited Talk, " The Human, the Eye and the Brain: Peeking at the Future of Neuro-Information Retrieval ". Big Data Scholarly Forum, Cal Poly Pomona, 2017
13. Invited Talk, "Information Storage and Retrieval". Qiannan Normal University China Visiting Faculty Delegates Seminar, College of Extended University, Global Education Institute, Cal Poly Pomona, 2017
14. Invited Talk, "From Everyday Applications to Recommendations: Unifying Relevance Feedback for Multi-application User Modeling". Computer Science Seminar, Department of Computer, Cal Poly Pomona, 2016
15. Invited Talk, "From Everyday Applications to Recommendations: Unifying Relevance Feedback for Multi-application User Modeling". Computer Science Seminar, Department of Computer and Information Science, University of Mississippi, 2016
16. "Unified Relevance Feedback for Multi-Application User Interest Modeling". ACM & IEEE Joint Conference on Digital Libraries (JCDL), Knoxville, TN, (June, 2015)
17. "Unified Relevance Feedback for Multi-Application User Interest Modeling". Student Research Week, Texas A&M University, College Station, TX, (March, 2015)
18. 3 Minute Thesis Competition (3MT), Texas A&M University, preliminary competition participant, "You might also like...From Everyday Applications to Recommendations", 2014.
19. "Multi-Application User Interest Modeling" Undergraduate Computer-Human Interaction, Texas A&M University, College Station, TX, (Sept., 2014)
20. "UIMaP: Mining Short-Term User Interest from Personalized Triage Tasks". Student Research Week, Texas A&M University, College Station, TX, (March, 2013)
21. "Oculomotor Plant Biometrics: Person-Specific Features in Eye Movements", Computational Research Division, Lawrence Berkeley National Laboratory, Berkeley, CA (July, 2009)
22. "2D Oculomotor Plant Mathematical Model for Eye Movement Simulation". Advanced Human Computer Interactions, Fall 2008, Texas State University - San Marcos, TX (Sep., 2008)
23. "New Segmentation Algorithm for Offline Handwritten Connected Character Segmentation". International Conference on Industrial and Information Systems (ICIIS), Peradeniya, Sri Lanka, (Aug., 2006)

Funding (Total: $806,837)
1. (Co-PI) Coastal Virginia Commonwealth Cyber initiative (COVA-CCI), "Laboratory for Developing Highly Secure IoT-based Applications for Real-time Data Acquisition and Analysis", 2021, $75,000
2. (PI) National Science Foundation, S&CC, "SCC-PG: Exploring STEM Educational Delivery for Youth in Norfolk Juvenile Detention Center" 2021, $150,000
3. (Sole PI) National Science Foundation, "CAREER: Eye Tracking Streaming Analytics", 2021, $550,000
4. (PI) Virginia Space Grant Consortium (VSGC), Innovative Projects Grant, "STARS: Secondary Teachers as Researchers with Satellites", 2021, $9455

5. (Sole PI) PRA Group, Charitable Contribution, "Data Science Highschool Summer Camp 2021", 2021, $10,000
6. (PI) Virginia Space Grant Consortium (VSGC), Innovative Projects Grant, "STRS: Student ThinSat Research Summer Camp 2020", 2020, $10,092
7. (Sole PI) Sigma Xi: The Scientific Research Society Research Grant (GIAR) "Human Oculomotor Plant Signature Modeling: are there unique and person specific physiological and behavioral features in oculomotor plant eye movement parameters?", 2009, $960
8. (Sole PI) Sigma Xi: The Scientific Research Society Research Grant (GIAR) "Human Oculomotor Plant Modeling: Is there a significant change or deficit in oculomotor function of mTBI patients compared to normal vision in healthy subjects?", 2008, $1330

Internal (Total: $66,245)
1. (Co-PI) Center for Learning and Teaching, Faculty Innovator Grant, "Drone Programming Studio", 2021, $750
2. (PI) College of Science Undergraduate Research Program, "U-REACT: Undergraduate Research Experience and Career Training" $10,000 + $5,000 matching from CS Department.
3. (Sole PI) Faculty Proposal Preparation Program (FP3), Old Dominion University, 2020
4. (Sole PI) Junior Faculty Research Mentoring Program (JFRMP), Old Dominion University, 2020
5. (PI) Special Projects for Improving the Classroom Experience (SPICE), Cal Poly Pomona, "Smart Modernization of Labs 3-2636 and 3-2642" , 2018, $16,165
6. (PI) Special Projects for Improving the Classroom Experience (SPICE), Cal Poly Pomona, "Using Eye Tracking to capture computer science students learning processes and to teach software usability and user experience" , 2018, $13,330
7. (Sole PI) Community College/Cal Poly Pomona Summer REU Program, Cal Poly Pomona, "Anti-surveillance Wearable Device to Combat Camera Facial Recognition Technology" , 2018, $3000
8. (Co-PI) Strategic Interdisciplinary Research Grant (SIRG), Cal Poly Pomona "Trafficking in Person: Social Media Profiles to Identify Trafficking Victims", 2017, $15,000
9. (Sole PI) Community College/Cal Poly Pomona Summer REU Program, Cal Poly Pomona, "Anti-surveillance Wearable Device to Combat Camera Facial Recognition Technology" , 2017, $3000

Travel and Professional Meeting Grants
1. Travel Grants   NSF CAREER Workshop Travel Grant, Alexandria, VA, 2018, $1200
2. Graduate And Professional Student Council Travel Grant, Texas A&M University For ACM CHIIR Conference, Chapel Hill, North Carolina, 2016, $500
3. ACM SIGIR Travel Grant, For ACM CHIIR Conference, Chapel Hill, North Carolina, 2016, $1190
4. ACM SIGIR Travel Grant, For ACM/IEEE JCDL Conference, Knoxville, Tennessee, 2015, $1275
5. Engineering Graduate Student Travel Grant, Computer Science Texas A&M University, For ACM/IEEE JCDL Conference, 2015, $1000
6. Graduate Climate Travel Grant, Dwight Look College of Engineering, Texas A&M University, For ACM CIKM Conference, Burlingame, California, 2013, $1000
7. Computer Science Department Travel Grant. Texas State University-San Marcos, For Sigma Xi International Research Conference, 2009, $250
8. Graduate College Travel Grant. Texas State University-San Marcos, For Sigma Xi International Research Conference, 2009, $100
9. ICIIS Conference Travel Award, Peradeniya, Sri Lanka, 2006

Teaching
- Human Computer Interaction, CS 795/895, Old Dominion University Instructor, Spring 2019, Spring 2022
- Introduction to Data Science & Analytics, CS 620, Old Dominion University Instructor, Fall 2019-Spring 2022
- Database Concepts, CS 450/550, Old Dominion University Instructor, Fall 2020
- Introduction to Data Mining, CS 495/595, Old Dominion University Instructor, Spring 2020
- Introduction to Data Science, CS 795/895, Old Dominion University

Instructor, Fall 2018, Fall 2019
- Introduction to Data Science, CS 299, Cal Poly Pomona
  Instructor, Spring 2018
- Database Systems, CS 435, Cal Poly Pomona
  Instructor, Summer 2018
- Introduction to Programming and Problem Solving, CS 141, Cal Poly Pomona
  Instructor, Spring 2018
- Topics in Databases, CS 575, Cal Poly Pomona
  Instructor, Winter 2018
- Introduction to Computer Science, CS 140, Cal Poly Pomona
  Instructor, Fall 2017
- Human Computer Interaction, CS 570, Cal Poly Pomona
  Instructor, Spring 2017
- Graduate Special Topics: Information Retrieval, CS 599, Cal Poly Pomona
  Instructor, Winter 2017
- Undergraduate Seminar, CS 463, Cal Poly Pomona
  Instructor, Winter 2017, Winter 2018
- Software Engineering, CS 480, Cal Poly Pomona
  Instructor, Fall 2016
- Introduction to C++, CS 128, Cal Poly Pomona
  Instructor, Fall 2016, Summer 2018
- Computers and New Media, CPSC 445/656, Texas A&M University
  Instructor, Spring 2016
- Computer-Human Interaction, CPSC 436, Texas A&M University
  Co-Instructor, Fall 2015
- Computer Applications, CS 100, University of Peradeniya, Sri Lanka
  Laboratory Instructor, Spring 2005
- Introduction to Computer Science, CS 101, University of Peradeniya, Sri Lanka
  Instructor, Fall 2006
- Programming Laboratory, CS 102, University of Peradeniya, Sri Lanka
  Laboratory Instructor, Fall 2006
- OO Software Design with Patterns, CS 407, University of Peradeniya, Sri Lanka
  Teaching Assistant for Dr. Saluka Kodituwakku, Spring 2005

Guest Lectures
- Guest Lectures   Computer-Human Interaction, CPSC 436, Texas A&M University
  Instructor: Frank Shipman, Fall 2014, Topics on multi-application user interest modeling with an emphasis on evaluation methods for information retrieval tasks.
- Advanced Human-Computer Interaction, CS 5369J, Texas State University, San Marcos
  Guest Lecturer, Instructor: Oleg Komogortsev, Fall 2009
- C and C++ Programming, CS 2308, Texas State University, San Marcos
  Guest Lecturer, Fall 2008

Training
- CIRTL Fellow, Academy for Future Faculty, Texas A&M University
  Center for the Integration of Research Teaching & Learning (www.cirtl.net) is a collaboration of research universities that seeks to produce a national STEM faculty who are both skilled researchers and excellent teachers, and who will be prepared to succeed in careers across the landscape of higher education.

Students Supervised

Old Dominion University
  Doctoral:
        Yasith Jayawardana 2019-
        Gavindya Jayawardena, 2019-

Bhanuka Mahanama 2019-
Bathsheba Nelson 2019-
Yasasi Abeysinghe 2022-
Brian Hanson (Co-Advisor with Gymama Slaughter) 2022-

PhD Committee:
Sawood Alam 2019-2020
Lulwah Alkwai 2018-2019
Mohamed Aturban, 2019-2020
Shawn Jhones 2019-2021
Slobodan Milanko 2019-2020
Alexander Nwala 2019-2020

MS Thesis/Project Committee:
Evan Savaria 2019
Ibrokhim Iskandarov, 2020-2021
Matt Gray (ECE), 2019-2021

Undergraduates:
Ben Mabe 2019
Tobin Zheng, 2020
Kayla Pineda, 2021-
James Owens, 2021-

High School Students (Summer Research)
Isuru Gunawardena, Ocean Lakes High School, Virginia Beach, VA, 2020
Asu Ghimire, Ocean Lakes High School, Virginia Beach, VA, 2021
Zahra Rizvi, York Highschool, Yorktown, VA, 2021

Cal Poly Pomona
Master of Science – Thesis/Project
Nada Alghofaili
Diana Lin
Raymond Luc
Sobiga Shanmugathasan
Shubbangi Shimpi
Sashi Thapaliya

Master of Science – Committee
Fariba Derakhshan
Nanwarin Chantarutai
Hana Alarifi
Irwin Soni
Amani Zamzami

Undergraduate
Joanna Cao – Freshman Research
Bryan Cepeda – Freshman Research
Micheal Huluf – Senior Project Advisor
Cesar Pedroza – Senior Project Advisor

Summer Research Experience for Undergraduates (REU)
Waleed Karim (2017 Summer REU Student, Citrus College)
Ricky Kim (2017 Summer REU Student, Cypress College)
High School Students (Summer Research)
Kenneth Chang (2017, Glen A. Wilson High School, Hacienda Heights, CA)

Kalvin Chang (2017, Glen A. Wilson High School, Hacienda Heights, CA)

Service to Department, College and University
- Trailing Marshal, Commencement, Old Dominion University, Fall 2021
- Lecturer Search Committee, Computer Science, Old Dominion University, 2021-2022
- Graduate Committee, Computer Science, Old Dominion University, 2019-2020
- Undergraduate Research Committee, Computer Science, Old Dominion University, 2019-2022
- Award Nominations Committee, Computer Science, Old Dominion University, 2019
- Substitute Marshal, Commencement, Old Dominion University, Summer 2019
- Judge, Graduate Research Achievement Day (GRAD), 2019
- Judge, Great Computer Challenge, 2019
- Assessment Committee, Computer Science, Cal Poly Pomona, 2016-2018
- Data Science Faculty Search Proposal Committee, Computer Science, Cal Poly Pomona, 2017-2018
- External Relations and Events Committee, Computer Science, Cal Poly Pomona, 2017-2018
- Faculty Search Committee (elected), Computer Science, Cal Poly Pomona, 2017-2018
- Scholarship Committee, Computer Science, Cal Poly Pomona, 2017-2018
- Graduate Committee, Computer Science, Cal Poly Pomona, 2016-2017
- Kellogg Honors College Show Case of Excellence, Cal Poly Pomona, 2017- 2018
- Kellogg Honors College Application (Essay) Review Panel, Cal Poly Pomona, 2017
- Judge, St Catherine Science Fair, St Catherine of Alexandria, Riverside, CA, January 5, 2017
- Graduate and Professional Student Council (GPSC), Texas A&M University, 2014, 2015
- Multicultural and Diversity Affairs (GPSC Internal Committee), Texas A&M University, 2015-2016
- Graduate Appeals Committee, Texas A&M University, 2015-2016
- Assistant Director, Academy for Future Faculty, Texas A&M University, 2015-2016
- Hearing Panel Member, Honor Council, Texas A&M University, 2015-2016
- Student Organization Accountability Board, Texas A&M University, 2014-2015
- Judge, Texas Junior Science and Humanities Symposium, January 24, 2014
- Judge, Engineering USRG/REU Poster Session, Texas A&M University, 2013, 2014, 2015
- Interview Committee, International Student Services Office, Texas State University, 2008
- College of Science Representative, Associated Student Government, Texas State University, 2009

Service to Community and Profession
Proposal Reviewer/Panelist
- (National Science Foundation Panel) CISE IIS 2019, CISE SCH 2021, CISE HCC 2021

Editor/Review Editor
- Review Editor, Frontiers in Physiology: Cognition, 2021-present
- Editor, Computer Science and Systems Biology: An Open Access, 2018-2019
- International Journal of Data Mining Science, Editorial Board, 2017-present
- Journal of Information Retrieval Research, Editorial Review Board, 2014-2015
- Open Directory Project (ODP) www.dmoz.org, 2012-2015

Organizing/Program Committee
- (ETRA) Doctoral Consortium Chair, 2022
- (JCDL) Poster Chair, Joint Conference on Digital Libraries, 2021
- (Big Data) PC, 2021
- (ACM PADS) Publicity Chair, 2021
- (JCDL) PC, 2017-2022
- (IUI) PC, ACM Intelligent User Interface, 2014, 2019-2022
- (CHIIR) PC, 2017-2022
- (ETRA) Senior PC, 2019-2021
- (AH) PC, Augmented Human, 2020
- (IEEE IRI) Publicity Chair, 2018-2019

- (IEEE IRI) Session Chair, 2017-2019
- (BIG Data, Special Session on Intelligent Data Mining) PC, 2017-2019
- (JCDL) Session Chair, 2019
- (JCDL) Doctoral Consortium co-chair, 2017-2018
- (CHIIR) Proceedings Chair, ACM Human Information Interactions and Retrieval, 2017
- (SOTICS) PC , 2017
- (CHIIR) PC, Workshop on Challenges in Bringing Neuroscience to research in Human-Information Interactions, 2017
- (JCDL) Publications Chair, Joint Conference on Digital Libraries, 2016
- (EnCHIReS) PC, Workshop on Engineering CHI in Recommender Systems, 2016
- (ICBEB) PC, Intl. Conference on Biomedical Engineering and Biotechnology 2014- 2017

Conference/Journal Reviewer
- (Cybernetics) IEEE Transactions on Cybernetics, 2021
- (IJDL) International Journal on Digital Libraries, 2019, 2021
- (ETRA) Eye Tracking Research & Applications Symposium, 2010, 2019-2021
- (JCDL) ACM/IEEE Joint Conference on Digital Libraries, 2017-2021
- (Big Data), IEEE Big Data, 2021
- (IUI) Intelligent User Interfaces, 2014, 2019-2021
- (CHIIR) Computer Human Information Interaction and Retrieval, 2017-2021
- (Neurocomputing) Elsevier Neurocomputing, 2020
- (IJHCS) International Journal of Human - Computer Studies, 2019
- (CRC Press Book Proposal) The Biometric Computing: Recognition and Registration, 2018
- (CHI) ACM CHI Computer-Human Interaction, 2018
- (Big Data) Special Session on Intelligent Data Mining, 2018
- (CHI Play) ACM SIGCHI Computer-Human Interaction in Play, 2015, 2017
- (IMAVIS) Elsevier Image and Vision Computing, 2017
- (PLOS ONE) Journal of Public Library of Science, 2017
- (UIST) ACM User Interface Software and Technology, 2017
- (IS) Elsevier Journal of Information Systems, 2017
- (ISS) ACM International Conference on Interactive Surfaces and Spaces, 2016
- (SUI) ACM Symposium on Spatial User Interactions, 2016
- (VRST) ACM Symposium on Virtual Reality Software Technology, 2016
- (IEEE TKDE) Knowledge and Data Engineering, 2015
- (C&C) ACM Creativity and Cognition, 2015
- (IDC) ACM SIGCHI Interaction Design and Children, 2015
- (IJIRR) International Journal of Information Retrieval Research, 2014
- (ICBEB) International Conference on Biomedical Engineering and Biotechnology, 2013, 2014
- (IEEE SMC) Journal on Systems, Man, and Cybernetics: Systems and Humans, 2012, 2013
- (IEEE SMC) Journal on Systems, Man, and Cybernetics: Cybernetics, 2012, 2013 2014, 2015
- (CIMCA) Computational Intelligence for Modeling Control and Automation, 2008

Outreach
- Trick-Or-Research, Organizer, Old Dominion University, 2019-2021
- STEAM on Spectrum, Organizing Committee, VMASC, 2019
- Science Connection Day, College of Science, Old Dominion University, 2019
- Coding Lecture, School Year, Juvenile Detention Center, Norfolk, 2019
- Coding Lecture, Sumer Enrichment Program, Juvenile Detention Center, Norfolk, 2019
- Guest Speaker, CSEGSA Boot camp, Texas A&M University, August 2015
- Computer Science & Engineering Graduate Student Association
- Forum Administrator / Moderator, www.sl2college.org, 2008-2017
- SL2college is a global community of volunteers that provides free advice and guidance to Sri Lankan students.

Professional Experience

- 2018-present   Old Dominion University, Norfolk, VA
  Assistant Professor, Computer Science
- 2016-2018   California State Polytechnic University, Pomona, CA
  Assistant Professor, Computer Science
- Summer 2012   Knowledge Based Systems Inc., College Station, TX
  Research and Development Intern (6 months)
- Summer 2009   Computational Research Division, Lawrence Berkeley National Lab, Berkeley
  Research Intern with Cecilia Aragon (UW-Seattle)
- 2005-2006   Statistics & Computer Science, University of Peradeniya, Sri Lanka
  Lecturer in Computer Science
- 2005-2006   American College of Higher Education, Kandy, Sri Lanka
  Visiting Lecturer in Computer Science
- 2005-2006   Information Technology Center, University of Peradeniya, Sri Lanka
  Visiting Instructor
- 2004-2005   Information Technology Center, University of Peradeniya, Sri Lanka
  Student Instructor

Awards and Honors

- Faculty Early Career Development Program (CAREER) Award, NSF, 2021
- Old Dominion University Alumni Association (ODUAA), New Faculty Award, 2021
- "Reign On" Faculty Recognition Award, Old Dominion University, 2020
- Who's Who Among Students in American Universities and Colleges, Texas A&M University, 2015
- Graduate Teaching Fellowship, Dwight Look College of Engineering, Texas A&M University, 2015
- Best Poster Award, Industrial Affiliates Program Poster Competition, 2012, 2014
- Regents Fellowship, Texas A&M University, 2010
- Graduate Academic Excellence Award, Computer Science, Texas State University, 2009, 2010
- Graduate Research Excellence Award, Computer Science, Texas State University, 2009, 2010
- Excellence in Leadership Award, Computer Science, Texas State University, 2010
- Graduate House - Certificate of Appreciation, Graduate College, Texas State University, 2010
- College of Science Graduate Scholar Award, Texas State University, 2009
- Associated Student Government (ASG) Bookstore Scholarship, Texas State University, 2009
- Associated Student Government (ASG) Scholarship, Texas State University, 2009
- University Award for Academic Excellence, University of Peradeniya, Sri Lanka, 2006
- ALUMNI Scholarship, Faculty of Science, University of Peradeniya, Sri Lanka, 2005
- Mahapola Higher Education Scholarship (4 academic years), Sri Lankan Government, 2001/2005