Oshani Seneviratne

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http://oshani.info | https://github.com/oshanis | https://www.linkedin.com/in/oshani

Work Experience

Rensselaer Polytechnic Institute — Troy, New York
Assistant Professor, Department of Computer Science — *Aug 2022 – Present*
Associate Director, Tetherless World Constellation (TWC) — *Aug 2022 – Present*
Director of Health Data Research, Institute for Data Exploration and Applications (IDEA) — *Aug 2017 – Aug 2022*

- As an assistant professor, I develop and teach courses on artificial intelligence and blockchain technologies, and lead the *BRAINS (Bridging Resilient, Accountable, Intelligent Networked Systems)* group, which focuses on fundamental research in decentralized systems (web and blockchain) and applied research in finance and healthcare.
- As the associate director at the TWC, I lead activities on advancing semantic web and web science research, education and outreach.
- As the director of health data research at IDEA, I was responsible for operationalizing the research work in the IBM-funded Health Empowerment through Analytics, Learning, and Semantics (HEALS) project.

Oracle Inc. — Irvine, California
Senior Software Engineer & Tech Lead — *Sep 2014 – Jun 2017*

- Architected provenance-tracking systems for several software products, including Enterprise Governance Risk Compliance, Human Capital Management, and Work-Life Applications.

MIT Computer Science and Artificial Intelligence Laboratory — Cambridge, Massachusetts
Research Assistant — *Sep 2007 – Aug 2014*

- Researched privacy, accountability, and content reuse on the Web.
- Architected the *HTTPA (Hypertext Transfer Protocol with Accountability)* and created tools such as the *Semantic Clipboard* for policy-aware content reuse.
- Implemented an extension of the linked data browser, *The Tabulator* and a linked data and AI framework on the MIT App Inventor, *Punya* with applications in disaster management, health, and education.

MIT Accelerating Information Technology Innovation — Manila, Philippines
Lead Technology Instructor — *Jun 2012 – Aug 2012*

- Conducted intensive summer programs on mobile application development at the University of the Philippines Diliman.

MIT Accelerating Information Technology Innovation — Nairobi, Kenya
Lead Technology Instructor — *Jun 2011 – Aug 2011*

- Conducted intensive summer programs on mobile application development at Swathmore University.

WSO2 Inc. — Colombo, Sri Lanka
Software Engineering Intern — *Feb 2006 – Jul 2006*

- Developed the StAX/OM parser to parse Web Services Description Language (WSDL) documents.

Education

Massachusetts Institute of Technology (MIT) — Cambridge, Massachusetts
Ph.D in Computer Science — *Sep 2009 – Aug 2014*
S.M in Computer Science — *Sep 2007 – Aug 2009*

- **Ph.D. Supervisor:** Tim Berners-Lee | **Thesis:** "Accountable Systems: Enabling Appropriate Use of Information on the Web" | **Committee:** Hal Abelson, Lalana Kagal, Susan Landau, Daniel Weitzner
- **S.M Supervisor:** Tim Berners-Lee | **Thesis:** "Policy Aware Content Reuse on the Web"

University of Southampton — United Kingdom
Web Science Research Exchange Student — *Jan 2009 & Summer 2009*

University of Oxford — United Kingdom
Summer Doctoral Student at the Oxford Internet Institute — *Summer 2008*

University of Moratuwa — Moratuwa, Sri Lanka
B.Sc. (Hons) in Computer Science and Engineering — *Jun 2003 – Jul 2007*

*[**Legend:** S = Spring, Su = Summer, F = Fall, IAP = Independent Activities Period]*

Teaching Experience

Courses at RPI

Introduction to AI	*S'25*
AI and Blockchain	*S'25, S'24, F'23, S'23, F'22*
AI in Fact and Fiction	*F'23, Su'22, Su'21*

Courses at MIT

Mobile Application Development, MIT Accelerating Information Technology Innovation	*Su'12 & Su'11*
Introduction to Computer Science, MIT Women's Technology Program	*Su'10*

Guest Lectures at RPI

Graduate Skills - "Ethics and Reproducibility"	*F'24 & F'23*
Blockchain Technologies at NSF CRAFT @RPI START Program for Community School Students	*Su'24*
Advanced Financial Technologies	*S'21*
Predictive Modeling	*S'20*
Data Analytics	*F'21, S'21, F'20, S'20, F'19, S'19*
Introduction to Artificial Intelligence	*S'19*
XInformatics	*S'21, S'20 & S'19*
Cognitive Computing	*S'19 & S'18*
Data Science	*F'18*
Web Systems	*F'18*
Ontology Engineering	*F'18*

Teaching Assistantships at MIT

Linked Data Ventures	*F'13, S'13, IAP'10*
6.042-Mathematics for Computer Science	*S'11*

Grants

Research Grants

- **Privacy-Preserving Synthetic Data Generation for Financial Machine-Learning Tasks** $100,000 from CRAFT; Project Duration: 06/01/2025 – 05/31/2026; **Role: PI**; with Stacy Patterson (co-PI)
- **Meta-Transfer-Learning for Data Generation, Distillation and Predictive Modeling** $150,000 from RPI-IBM Future of Computing Research Collaboration (FCRC) grant; Project Duration: 01/01/2025 – 12/31/2025; **Role: PI**; with Horst Samulowitz, Parikshit Ram, and Yi Zhou (IBM PIs)
- **Smart Encoding and Automation of Over-The-Counter Derivatives Contracts** $100,000 from NSF IUCRC Center for Research toward Advancing Financial Technologies (CRAFT); Project Duration: 06/01/2024 – 05/31/2025; **Role: PI**; with Aparna Gupta (co-PI)
- **Large Transaction Models (LTMs) for FinTech** $100,000 from CRAFT; Project Duration: 06/01/2024 – 05/31/2025; **Role: co-PI**; with Kristin Bennett (PI)
- **Data Distillation in Tabular Data: A Foundation Model Approach** $100,000 from RPI-IBM Future of Computing Research Collaboration (FCRC) grant; Project Duration: 01/01/2024 – 12/31/2024; **Role: PI**; with Horst Samulowitz, Parikshit Ram, and Yi Zhou (IBM PIs)
- **Blockchain Interoperability for Business Organizations** $100,000 from CRAFT; Project Duration: 06/01/2023 – 05/31/2024; **Role: PI**; with Aparna Gupta (co-PI)
- **Efficient, Private, and Explainable Federated Learning for Financial Crime Detection** $100,000 from CRAFT; Project Duration: 06/01/2023 – 05/31/2024; **Role: co-PI**; with Stacy Patterson (PI)
- **Multidisciplinary Educational Global Alliance for Algorand Center of Excellence (MEGA-ACE)** $120,000 research funding from Algorand Foundation; Project Duration: 08/01/2022 – 07/31/2023; **Role: co-PI**; with Lirong Xia (co-PI) and sub-contract to Purdue University with Vassilis Zikas (PI)
- **Risk Mitigation in Cross-Platform Decentralized Finance** $100,000 from CRAFT; Project Duration: 06/01/2022 – 05/31/2023; **Role: PI**; with Aparna Gupta (co-PI)
- **Risky Business? Deep Dives into DeFi** $100,000 from CRAFT; Project Duration: 06/01/2022 – 05/31/2023; **Role: co-PI**; with Kristin Bennett (PI)

- **Augmentable Smart Contracts** for $100,000 from RPI-IBM Artificial Intelligence Research Collaboration (AIRC); Project Duration: 01/01/2019 – 12/31/2019; **Role: PI**; with Lirong Xia (co-PI)

Other Grants

- **Amazon Web Services Credits** for $5,000 for the Large Transaction Models Project; **Role: PI**; with Kristin Bennett (co-PI)
- **NSF grant** for $20,000 towards International Semantic Web Conference 2019 student travel support; **Role: PI**

Awards

Distinguished Paper Award at the American Medical Informatics Association (AMIA) '23 Annual Symposium for "MentalHealthAI: Utilizing Personal Health Device Data to Optimize Psychiatry Treatment"
https://amia.org/about-amia/amia-awards/research-awards/distinguished-paper-awards

Mobile Health Training Institute Scholar Award at UCLA from Apr - Sep, 2023
https://mhti.md2k.org/index.php/scholars

Best Paper Award at the Knowledge Discovery and Data Mining Workshop at the ACM KDD'22 for "Leveraging Clinical Context for User-Centered Explainability: A Diabetes Use Case"; Shruthi Chari, Prithwish Chakraborty, Mohamed Ghalwash, Oshani Seneviratne, Elif K Eyigoz, Daniel M Gruen, Fernando Suarez Saiz, Ching-Hua Chen, Pablo Meyer Rojas, Deborah L McGuinness

Best Student Paper Award at the 4th International Workshop on Data Engineering Meets Intelligent Cooking Recipes (DÉCOR) 2021 for "Semantic Modeling for Food Recommendation Explanations"; Ishita Padhiar, Oshani Seneviratne, Shruthi Chari, Daniel M. Gruen, and Deborah L. McGuinness

Gamechanger | Best Out of the Box Prize for "EMSights: Emergency Medicine Insights" at the FHIR @hack 2021

Best Resource Paper Award at the 19th International Semantic Web Conference 2020 for Explanation Ontology: A Model of Explanations for User-Centered AI; Shruthi Chari, Oshani Seneviratne, Daniel M. Gruen, Morgan A. Foreman, Amar K. Das, Deborah L. McGuinness

Best Use of Data Award at NASA Space Apps Challenge 2016.

Best Communications App at the Public Safety and Emergency Preparedness, AT&T Mobile App Hackathon, Washington DC, May 2014

Best Computing and Most Technically Interesting Project Award at the Big Travel Data Hackathon 2013, Boston MA

Key Scientific Challenge Winner in the Privacy and Security Category awarded by Yahoo! Research, 2011

Press

Rensselaer Researchers Work To Avoid Future FTX Debacles,
https://news.rpi.edu/content/2023/01/10/rensselaer-researchers-work-avoid-future-ftx-debacles, January 2023

Rensselaer To Advance Blockchain Tech With $360k Grant,
https://news.rpi.edu/content/2022/08/30/rensselaer-advance-blockchain-tech-360k-grant, September 2022

Rensselaer Polytechnic Institute to Co-chair Symposium on AI for Social Good,
https://news.rpi.edu/approach/2019/10/30, October 2019

Rensselaer Researchers Use Blockchain to Boost Medical Image Sharing,
https://hitinfrastructure.com/news/rensselaer-researchers-use-blockchain-to-boost-medical-image-sharing, June 2019

Delving Deep Into Artificial Intelligence, https://magazine.rpi.edu/feature/delving-deep-into-artificial-intelligence

Who's Using Your Data? MIT News (https://news.mit.edu/2014/whos-using-your-data-httpa-0613), June 2014, and MIT Technology Review (https://www.technologyreview.com/2014/08/19/171702/whos-using-your-data), August 2014

How 'HTTP with Accountability' Will Let You Track Who Uses Your Data, Motherboard Vice (https://www.vice.com/en/article/qkvjkv/how-http-with-accountability-will-let-you-track-who-uses-your-data), June 2014

Accountable HTTP Seeks to increase data privacy through transparency, ComputerWorld (https://www.computerworld.com/article/2695722/accountable-http-seeks-to-increase-data-privacy-through-transparency.html), June 2014

Invited Talks

Blockchain Technologies

- **Decentralized Knowledge Graphs: A New Frontier for Web Data Intelligence** at the Data Intelligence and Knowledge Service Symposium; December 15, 2024; Invited by Prof. Fenghong Liu,
- **Shaping the Web's Future with Decentralized Knowledge Graphs** at the World Wide Web Day organized by the IEEE Women in Engineering Student Branch Affinity Group of the University of Jaffna; August 01, 2024
- **Synergistic Combinations of AI and Web3** at Past, Present and Future of Fintech @RPI – A Bicentennial Celebration; Chaired by Prof. Aparna Gupra; March 27, 2024
- **Blockchain and AI Synergies** at Applied Innovation Exchange New York: A platform for Open Innovation: Where Research meets Industry; Hosted by Bob Schwartz and Kalpesh Sharma, Capgemini Inc.; March 21, 2024
- **Chaining Intelligence: Exploring the Intersection of Blockchain and AI**, at Hack@CEWIT (https://www.stonybrook.edu/commcms/cewit/hackatcewit2024/about/index.php) at the Center of Excellence in Wireless and Information Technology (CEWIT) at Stony Brook University; Hosted by Rong Zhao and Christopher Lange; March 2, 2024
- **Navigating the Nexus: The Synergy of Large Language Models, Knowledge Graphs, and Blockchain in Decentralized Intelligence** at DKGCon'23, on Oct 9, 2023 https://dkgcon.origintrail.io
- **Chaining Intelligence: Exploring the Intersection of Blockchain and AI** at the "MEGA-ACE NTUA Summer School" (https://mega-ace.corelab.ntua.gr/summer-school) on May 24, 2023; Hosted by Aris Pagourtzis
- **Unleashing the Power of Decentralized Knowledge Graphs in the Web3 Era** at the "AtheCrypt 2023" (https://mega-ace.corelab.ntua.gr/index.php/athecrypt) at the Zografou Campus, National Technical University of Athens, Greece on May 19, 2023; Hosted by Vassilis Zikas
- **Empowering Decentralization through Algorand's Smart Contracts** at the "Texas A & M Blockchain Day" (http://tamublockchain.github.io) at the Texas A & M University on May 01, 2023; Hosted by Juan A. Garay
- **Decentralized Knowledge Graphs** at the "Knowledge Graph Day" at the Web Conference (https://www2023.thewebconf.org/special/knowledge-graph-day), Austin Texas on April 30, 2023; Hosted by Ying Ding
- **Building Future Applications: Decentralized Application Development with Blockchain**, at Hack@CEWIT (https://www.stonybrook.edu/commcms/ecodev/news/Hack@CEWIT2023.php) at the Center of Excellence in Wireless and Information Technology (CEWIT) at Stony Brook University; March 3, 2023; Hosted by Rong Zhao, Kathleen Ferrell, and Christopher Lange
- **Social Computing and Blockchain: From Incentive Mechanisms to Computer-supported Cooperative Work**, 3rd International Conference of Social Computing at Tsinghua University, China in December 2021; Invited by Jar Der Luo
- **Spark Webinar: An Introduction to Research Opportunities in Distributed Ledger Technologies**, Hosted by Prof. Suranga Nanayakkara; December 2020; https://www.youtube.com/watch?v=scpvQl86xdA
- **Decentralized Applications Augmented with Learning and Semantics**, Deakin University, Melbourne Australia; November 2019; Hosted by Dr. Niroshinie Fernando, and Dr. Jong Jeong and the University of Auckland SoCS Seminar; October 2019; Hosted by Prof. Danielle Lottridge and Prof. Rizwan Asghar
- **Building Smart Trustworthy Decentralized Applications**, DePaul University's Computer Science Colloquium; Hosted by Prof. Isuru Godage, September 2019
- **Smart Contracts in Financial Applications**, Rensselaer Polytechnic Institute's Center for Financial Studies (CFS) Quantitative Finance Workshop 2019; Hosted by Prof. Aparna Gupta, September 2019

World Wide Web

- **Enabling Appropriate Use of Information on the Web**, Harvey Mudd College Computer Science Colloquium; Hosted by Prof. Robert Keller and Prof. Yi-Chieh Wu, April 2017
- **Healthcare Privacy and Intellectual Property Rights Protection with Information Accountability**, at Data Privacy Lab, Harvard University, May 2014
- **Who? What? When? Where and Why? Towards Transparent Healthcare Applications**, at 2014 EITA Conference on New Media and Biomedical Research at MIT, August 2014
- **Accountable Systems**, at TWed RPI, April 2014
- **Transparent Web Systems**, at Amazon PhD Symposium, November 2013
- **Decentralized Provenance Management for User Managed Access**, for the IETF OAuth 2.0 working group, November 2013
- **Policy Aware Content Reuse**, at Emerging Information and Technology Association – Young Investigator Conference, August 2013

- **Accountable Web Protocols**, at Library of Congress, May 2012
- **Addressing and Identifying Privacy Leakage from Query Logs: An Accountability Approach**, at Microsoft Research, June 2011
- **Detecting Creative Commons Attribution License Violations on Flickr Images on the World Wide Web**, at the Creative Commons Summit, December 2008

Knowledge Graphs

- **Enhancing the FoodKG Inference with Retrieval Augmented Generation**, Knowledge Graph Conference'24, May 08, 2024
- **FoodKG: A Semantics Driven Knowledge Graph for Food Recommendations**, IEEE Big Data 2019 Workshop on Big Food and Nutrition Data Management Analysis, December 09, 2019
- **Enabling Trust in Clinical Decision Support Recommendations through Semantics**, at University of Melbourne, Melbourne, Australia; November 2019; Hosted by Prof. Karin Verspoor
- **RDF-Powered Dialog Systems**, at TWed RPI, October 2017

Mobile Application Development

- **Linked Data Connections**, at MIT App Inventor Summit, July 2013
- **Android Application Development**, at Google DevFest, Manila, Philippines, Aug 2012

Career Advice

- **Exploring Your Future in Computer Science: Paths to Success in Technology and Research**, at "Eureka!" Program at Girls Inc. Capital Region, October 2024
- **Navigating Industry and Academia: Insights and Strategies for a Successful Career in Computer Science**, at "What's Next?" Career Talk session at the Rochester Institute of Technology, January 2023
- **Computer Science for All Girls** at Auburn University, Alabama, July 2013

Invited Panels

- **Conference Preparation**, at Rensselaer Lunch and Learn Series on January 15, 2025 at Rensselaer Polytechnic Institute
- **CRAFT PI Experience**, at CRAFT Industry Advisory Board Meeting on Oct 24, 2024 at Stevens Institute of Technology
- **Generating and Querying Graphs with LLM**, at Knowledge Graph Conference'24 Healthcare and Life Sciences Symposium (https://healthcare-life-sciences.github.io) on May 7, 2024, moderator
- **Trusted AI for media and education**, at DKGCon'23 (https://dkgcon.origintrail.io) on Oct 9, 2023, moderated by Žiga Drev, co-founder OriginTrail
- **KG in Academia**, moderated by Sergio Baranzini and hosted at the Knowledge Graph Day at the Web Conference, Austin on April 30, 2023
- **Education and Research in Blockchains and Web3**, hosted by Blockchain Acceleration Foundation at the University of Texas, Austin on April 26, 2023
- **Technology Enablers for Financial Instruments**, at IEEE Services 2021 Conference, Sep 9, 2021 (virtual)
- **MIT Electrical Engineering and Computer Science Alumni Panel**, organized by Prof. Leslie Kolodziejski, March 6, 2021 (virtual)
- **AI for Humanitarian Technologies and Disaster Management**, at the AAAI AI for Social Good Fall 2020 symposium, Nov 14, 2020 (virtual)
- **AI for Healthcare**, at the AAAI AI for Social Good Fall 2020 symposium, Nov 13 2020 (virtual)
- **Semantic Machine Learning**, at IEEE International Conference on Semantic Computing 2019, Newport Beach, CA, Feb 01, 2019
- **The Future of Blockchain**, at the Rensselaer Silicon Valley Executive Council moderated by Dean Curt Breneman; San Jose, CA; Dec 5, 2018; Link: https://giving.rpi.edu/western-digital-rensselaer-panel-discussion-blockchain
- **Applying lessons learned from Web Science Research to Blockchain Research** at the 10 years of Web Science: Closing the Loop, Dagstuhl Workshop, June 2018

Professional Service

University Service

- PhD Research Qualifying Exam Committee Member for the following students: Danielle Villa (F'24), Bao Pham (S'23), Vijay Sadashivaiah (F'22)
- RPI Logic Center Steering Committee 2024 Summer - Present
- RPI Computer Science Department's Colloquium Committee F'23 - Present
- RPI Computer Science Department's Graduate Admissions Committee F'22 - Present
- RPI Computer Science Department's Diversity, Equity and Inclusion Committee F'22 - Present
- RPI Lally School Management's Faculty Search Committee S'22
- Member of Rensselaer Institute for Data Exploration and Applications (IDEA) F'17 - Present
- Member of Rensselaer Center for Materials, Devices, and Integrated Systems (CMDIS) S'22 - Present
- Member of Rensselaer Center for Research Advancing Financial Technologies (CRAFT) F'22 - Present
- President, Sri Lankan Student Association at MIT 2011 – 2014
- Member, MIT Online Education Steering Group 2010 – 2011
- Event Commissioner, MIT Computer Science, and Artificial Intelligence Laboratory (CSAIL) Olympics 2009 – 2012
- President, MIT Graduate Women in Course 6 2010 – 2011
- Board Member, GWAMIT (Graduate Women at MIT) 2010 – 2011
- Middle & High School Speaker for MIT Women's Initiative 2010 – 2011
- Treasurer, MIT CSAIL Student Committee 2009 – 2010
- Program Chair and Webmaster, MIT CSAIL Student Workshop 2009 – 2010

Leadership Roles in Professional Organizations

- Web Science Trust Network (WSTNet) Vice-Chair 2024 - Present
- Member, OriginTrail ChatDKG Steering Committee 2023 - Present
- Northeast Big Data Innovation Hub Leadership Team 2020 - Present

Proposal Review

- NSF IUCRC: Industry-University Cooperative Research Centers Program 2024

International Award Committees

- ACM Web Science Test of Time Award Committee Chair 2024
- ACM Web Science Test of Time Award Committee Member 2023

Conference Organization

- History of the Web Co-Chair, ACM Web Conference 2025
- Steering Committee Member, International Conference on Knowledge Capture (K-CAP) www.k-cap.org 2024 - 2027
- Program Co-Chair, ACM Web Science Conference 2024 and 2022
- Doctoral Consortium Chair, International Semantic Web Conference 2022
- Poster and Demo Chair, International Semantic Web Conference 2021
- Proceedings Chair, International Semantic Web Conference 2020
- Workshop and Tutorials Chair, ACM Conference on Web Science 2020 and 2021
- Student Coordinator Chair, International Semantic Web Conference 2019
- Developers Day Chair, the World Wide Web Conference 2016
- Publicity Chair, International Semantic Web Conference 2012

Symposium & Special Track Organization

- Decentralized Knowledge Graph Track at the Knowledge Graph Conference 2023
- Healthcare and Life Sciences Symposium at the Knowledge Graph Conference 2022, 2023 & 2024
- AAAI Fall Symposium on AI for Social Good 2019 and 2020
- AAAI Spring Symposium on Structured Data for Humanitarian Technologies 2015

Workshop Organization

- Personal Health Knowledge Graph Workshop at the Knowledge Graph Conference 2020 and 2021
- International Multidisciplinary Workshop on Advances in Artificial Intelligence for Blockchain at IEEE Blockchain (AIChain) 2019, 2020, and 2021
- International Workshop on Knowledge Graph: Heterogeneous Graph Deep Learning and Applications 2021

Journal Special Issue Organization

- Special Issue on Semantic Technologies for Data and Algorithmic Governance at the Semantic Web Journal 2020 - Present

Tutorial Organization

- "Mobile, AI-based and IoT-enabled Clinical Apps by End-Users Using Punya" at Artificial Intelligence in Medicine Conference (AIME), June 2022 https://punya.mit.edu/tutorials/punya2022

Hackathon Organization

- "Global Blockchain Hackathon - April 14-16, 2023, as part of the Multi-disciplinary Educational Global Alliance for Algorand Centre of Excellence (MEGA-ACE) program https://www.mega-ace.org/hackathon

Hackathon Judging

- HackRPI (https://hackrpi.com): 2023, 2022, 2021
- Hack@CEWIT (https://www.stonybrook.edu/commcms/cewit/hackatcewit/schedule): 2024, 2023

Journal Editorial Boards

- MIT Press Data Intelligence 2024 - Present
- Transactions on Graph Data and Knowledge (TGDK) 2023 - Present
- Journal of Social Computing (Associate Editor) 2023 - Present
- Semantic Web Journal 2022 - Present
- Journal of Web Semantics 2018 - 2023

Journal Paper Reviewing

- Special Issue on Autonomous Systems and Knowledge Graphs in the Transactions on Graph Data and Knowledge (TGDK) 2024
- ACM Transactions on Privacy and Security (TOPS) 2024 - Present
- Springer Nature BMC Medicine 2022 - Present
- IEEE Internet Computing 2022 - Present
- ACM Computing Surveys 2022 - Present
- IEEE Transactions in Engineering Management Journal 2019 - Present
- IEEE Transactions in Engineering Management Journal 2019
- Computingreviews.com 2012 - 2014
- IEEE Information Systems 2009

Conference Paper Reviewing

- The North American Manufacturing Research Conference (NAMRC) 2025
- The 9th International Joint Conference on Rules and Reasoning (RuleML+ RR) 2025
- MIT AIED 2024
- Knowledge Graph Conference (KGC) 2024 and 2022
- International Joint Conferences on Artificial Intelligence (IJCAI) 2023
- Web Conference History of the Web Track 2024 and 2023
- Web Science Conference Senior Program Committee Member 2023, 2025
- IEEE/ACM Web Intelligence 2021
- International Conference on Deep Learning, Big Data, and Blockchain 2021
- IEEE Decentralized Applications Conference 2022, 2021, and 2020
- IEEE Blockchain Conference 2022, 2021, and 2020
- Association for Medical Informatics Association (AMIA) 2020
- World Wide Web Conference 2023, 2018, 2017, 2016, 2015, 2014, and 2013
- International Semantic Web Conference 2022, 2017, 2014, 2013, and 2012
- ACM Web Science Conference 2019

- ACM International Conference on Information and Knowledge Management 2018

Workshop Paper Reviewing

- Semantic Machine Learning Workshop at the IEEE Semantic Computing Conference 2019
- International Workshop on Knowledge Graphs on Travel and Tourism at International Conference on Business Information Systems 2019
- Workshop on Semantic Machine Learning, IJCAI 2017

Miscellaneous

- Discussant, "Vulnerability and profitability of block reorganization in Ethereum 2.0" at the IEEE Computational Intelligence in Finance and Economic Conference (CIFEr) 2024
- Secretary, Visakha Vidyalaya Alumni Association of Southern California (vaasocal.org) 2015 – 2018
- External Advisory Committee Member, the University of California Irvine Continuing Education 2016 – 2017
- Invited Expert, Social Web Incubator Group, W3C 2009 – 2010
- Open Source Committer for Apache Woden, Axis2 and Forest projects 2006 – 2008

Current Student Researchers

PhD Students (As Advisor)

Inwon Kang	F'22 - Present
Fernando Spadea	S'23 - Present
Maruf Ahmed Mridul	F'23 - Present
Md Saikat Islam Khan Bappy *(Co-Advisor: Stacy Patterson)*	F'23 - Present

PhD Students (As Doctoral Committee Member)

Aaron Green *(Chair: Kristin Bennett)*	Candidacy: F'23
Bishwajit Saha *(Chair: Mohammed J. Zaki)*	Candidacy: S'24

Masters Students

Yu-Kai Wang | *Project: Text-Summarization Quality Evaluator*	F'24 - S'25
Samyuth Sagi | *Project: EmSights*	S'24 - S'25
Aarnav Patel | *Project: Swarm Contracts*	F'24 - S'25
Justin Ottesen | *Project: General Swarm Contract Simulator*	F'24 - S'25
Joshua Carson Youngbar | *Project: Cooperative AI with Blockchain*	S'25 - F'25
Faizaan Ali | *Project: AI Accountability through Data Provenance and Decentralized Knowledge Graphs*	F'25 - S'26

Undergraduate Research Students

Faizaan Ali | *Project: Data Provenance for AI Model Training*	F'24 - S'25
Kaiyang Chang | *Project: CRAFT Blockchain Interoperability & Smart Derivatives Contract Encoding*	S'24 - S'25

Independent Study Supervision

Justin Ottesen | *Project: Battlecode*	S'25

Past Student Researchers

PhD Student (As Co-Chair)

Shruthi Chari *(Chair: Deborah McGuinness); First Position: Research Scientist at BMS*	F'18 - Su'24

PhD Students (As Doctoral Committee Member)

Bingsheng Yao *(Chair: Jim Hendler); First Position: Postdoc at Northeastern University*	Defense: S'24
Sola Shirai *(Chair: Deborah McGuinness); First Position: Research Scientist at IBM*	Defense: S'24

Masters Students (As Primary Advisor)

Brendan Capuzzo | *Project: Explanations for Mobile AI*	S'24 - F'24
Matthew Uryga | *Project: DeFi Analysis; First Position: Software Engineer at Goldman Sachs*	F'23 - S'24

Masters Students (As Thesis Committee Member)

Matthew Pisano | *Project: Jailbreaking LLMs*	F'23 - S'24

Undergraduate Research Students

Chengyu Zhang | *Project: Privacy for Vertical Federated Learning*	F'24
Siddhant Agarwal | *Project: Explainability for Mobile AI*	F'24
Albert Bao | *Project: AI Model Safety*	F'24
Ashley Chan | *Project: EmSights*	F'24
Tripp Lyons | *Project: Flow Matching for Compression & Blockchain Interoperability*	F'24 and F'23
Joshua Moskoff | *Project: Smart Derivatives Contracts*	F'24
Suhas Palwai | *Project: Automating Financial Contracts*	F'24
Daniel Obolensky | *Project: Tracing AI Training Data*	F'24
Bijun Wu | *Project: Federated LLMs*	F'24
Max Zhang | *Project: Machine Unlearning for Privacy and Piracy*	F'24
David Fong | *Project: MentalHealthAI*	F'23 - S'24
Tianshu Chu | *Project: MentalHealthAI*	F'23 - S'24
Matthew Merritt | *Project: Federated Learning with Explainability*	S'24
Samyuth Sagi | *Project: EMSights*	S'23 - F'23
Aarnav Patel | *Project: Swarm Contracts*	F'23 - S'24
Manan Shukla | *Project: BlockIoT*	F'19 - S'23
Kate Carbone | *Projects: BlockIoT & Blockchain Interoperability*	F'21 - S'23
Jared Gridley | *Project: Crypto Scam Detection*	F'21 - S'23
John Cohen | *Project: Research Data Sharing*	F'22 - S'23
Vishnu Kchittibhooma | *Project: Blockchain Interoperability*	F'22 - S'23
Conor Flynn | *Project: DeFi Data Engine*	S'23
Noah Kader | *Project: Web Cleanup!*	S'23
Stanley Guo | *Project: Blockchain Interoperability*	S'23
Jiawei Wu | *Project: Swarm Contracts*	S'23
Haoran Bao | *Project: Swarm Contracts*	S'23
Ryan Cheng | *Project: Swarm Contracts*	S'23
Huy Chu | *Project: Explainable Mobile App Development*	S'23
Megan Goulet | *Projects: Explainable Mobile App Development & HEALS*	Su'20 & S'23
Zhihan Chen | *Project: HEALS*	Su'22 - F'22
Kacy Adams | *Project: Research Data Sharing*	F'20 - F'22
Catherine Wang | *Project: Decentralized Social Network Analysis & Research Data Sharing*	S'21 - F'22

Javier Marin-Maymi | *Project: BlockIoT*	F'22
Griffin Dong | *Project: Blockchain Interoperability*	F'22
Henry Liu | *Project: Algorand Blockchain Research*	F'22
Jacky Xu | *Project: Algorand Blockchain Research*	F'22
Noe Horowitz | *Project: Research Data Sharing*	F'21 - S'22
Runxin Li | *Project: NFT Research*	F'21 - S'22
Cindy Lyu | *Project: BlockIoT*	Su'22
Juhi Gupta | *Project: BlockIoT*	S'22
Junxi He | *Project: NFT Research*	S'22
Junyi Wu | *Project: NFT Research*	S'22
Qizhi (George) Lu | *Project: HEALS*	Su'21 - S'22
Prasant Acharya | *Project: HEALS*	Su'21 - F'21
Karthik Dusi | *Project: BlockIoT*	F'21
Ruoyi (Jennifer) Zhan | *Project: Research Data Sharing*	S'21 - F'21
Andrew Szoke | *Project: Research Data Sharing*	S'21
Sahith Bhamidipati | *Project: Research Data Sharing*	S'21
Jiahang Wang | *Project: SCALES*	F'20 - S'21
Roman Vakhrushev | *Project: Federated Learning with Smart Contracts*	F'20 - S'21
Kharn Nigam | *Project: Federated Learning with Smart Contracts*	S'21
Benjamin Kelly | *Project: Research Data Sharing & HEALS*	S'20 - F'20
Daniel Kazenoff | *Project: Crypto Scam Detection*	F'19 - S'20
Yuheng Zhou | *Project: HEALS*	S'20
Aaron Hill | *Project: HEALS*	S'20
Ruisi Jian | *Project: HEALS*	S'20
Samarth Patel | *Project: HEALS*	S'20
Xingjian Zhao | *Project: SCALES*	Su'19 - S'20
Shuze Liu | *Project: SCALES*	F'18 - S'20
Yanlin Zhu | *Project: SCALES*	F'18 - S'20
Robin Hong | *Project: SCALES*	S'19
Gretchen Forbush | *Project: SCALES*	Su'19 - S'20
Jade Franklin | *Project: HEALS*	Su'19

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2. Leslie F Sikos, **Oshani Seneviratne**, Deborah L McGuinness (2021). *Provenance in Data Science*. Springer. https://doi.org/10.1007/978-3-030-67681-0.

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Workshop Papers

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