

Oshani Seneviratne

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WORK EXPERIENCE

- Rensselaer Polytechnic Institute (RPI)** 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 *HTTTPA* (*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

TEACHING EXPERIENCE

Courses at RPI

<i>Decentralized AI</i>	<i>S'26</i>
<i>Frontiers in Blockchain Research</i>	<i>S'26</i>
<i>Introduction to AI</i>	<i>S'25</i>
<i>AI and Blockchain</i>	<i>S'25, S'24, F'23, S'23, F'22</i>
<i>AI in Fact and Fiction</i>	<i>F'23, Su'22, Su'21</i>

Courses at MIT

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

Guest Lectures at RPI

<i>Computer Information Systems - "Overview of Large Language Models"</i>	<i>Su'25</i>
<i>Graduate Skills - "Ethics and Reproducibility"</i>	<i>F'25, F'24 & F'23</i>
<i>Blockchain Technologies at NSF CRAFT @RPI START Program for Community School Students</i>	<i>Su'24</i>
<i>Data Analytics Research Lab</i>	<i>F'21</i>
<i>Advanced Financial Technologies</i>	<i>S'21</i>
<i>Predictive Modeling</i>	<i>S'20</i>
<i>Data Analytics</i>	<i>F'21, S'21, F'20, S'20, F'19, S'19</i>
<i>Introduction to Artificial Intelligence</i>	<i>S'19</i>
<i>XInformatics</i>	<i>S'21, S'20 & S'19</i>
<i>Cognitive Computing</i>	<i>S'19 & S'18</i>
<i>Data Science</i>	<i>F'18</i>
<i>Web Systems</i>	<i>F'18</i>
<i>Ontology Engineering</i>	<i>F'18</i>

Teaching Assistantships at MIT

<i>Linked Data Ventures</i>	<i>F'13, S'13, IAP'10</i>
<i>6.042-Mathematics for Computer Science</i>	<i>S'11</i>

GRANTS

Research Grants

- **Cascade-Adjusted Risk Analytics: Embedding Self-Organized Criticality into Value-at-Risk and Expected Shortfall** \$100,000 from CRAFT; Project Duration: 06/01/2026 – 05/31/2027; **Role: PI** ; with Mary Lai Salvana (co-PI)
- **Quantum Resilience of Proof-of-Work Cryptocurrencies** \$100,000 from CRAFT; Project Duration: 06/01/2026 – 05/31/2027; **Role: co-PI** ; with Stacy Patterson (PI)
- **Latent Representation and Tiered Indexing for Scalable and Efficient Data Product Creation from Large Data Lakes** \$110,000 from RPI-IBM Future of Computing Research Collaboration (FCRC) grant; Project Duration: 01/01/2026 – 12/31/2026; **Role: PI**; with Horst Samulowitz, Nandana Mihindukulasooriya, Kavitha Srinivas, Sola Shirai (IBM PIs)
- **A Novel Educational Assessment Framework for Enhancing Critical Thinking and Self-Efficacy via Generative AI Integration** \$100,000 from Google.org; Project Duration: 08/01/2025 – 07/31/2026; **Role: co-PI**; with Lydia Manikonda (PI), Mei Si (co-PI), and Kristin Bennett (co-PI)
- **Explainable Risk and Coverage with Computable Insurance Contracts** \$100,000 from CRAFT; Project Duration: 06/01/2025 – 05/31/2026; **Role: PI**
- **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

Best Paper Award at the RAGE-KG Workshop at the ISWC'25 for “Parallel and Multi-Stage Knowledge Graph Retrieval for Behaviorally Aligned Financial Asset Recommendations”; Fernando Spadea and Oshani Seneviratne

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 International Semantic Web Conference 2019 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 Challenges Award in the Privacy and Security Category awarded by Yahoo! Research, 2011

RPI's Oshani Seneviratne Appointed Deputy Chair of Web Science Trust Network,
<https://news.rpi.edu/2025/03/14/rpis-oshani-seneviratne-appointed-deputy-chair-web-science-trust-network>

Announcing new Chair and Deputy Chair of WSTNet,
<https://webscience.org/announcing-new-chair-and-deputy-chair-of-wstnet/>

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

Research

- **Bridging Resilient Accountable Intelligent Networked Systems** at the Jožef Stefan Institute (JSI), Ljubljana, Slovenia; May 15-22, 2026; Invited by Prof. Tome Eftimov
- **Federated Learning Meets Solid: Privacy-Preserving Personalization with Federated LLMs and Solid Pods** at the Solid Symposium, London, London, United Kingdom; April 30 - May 1, 2026; Invited by Prof. Ross Horne, Prof. Nigel Shadbolt and Dr. Beatriz Esteves
- **Decentralized Personalization** at the Nanyang Technology University; November 19, 2025; Invited by Prof. Erik Cambria
- **Sustainable Knowledge Graphs: Community-Driven Models for Long-Term Impact;** Flinders University; May 12, 2025; Invited by Dr. Asara Senaratne
- **Verifiable Provenance for the Web,** 15th Temporal Web Analytics Workshop (TempWeb) at the Web Conference'25, May 2025
- **Keeping Knowledge Graphs Alive: Constructing, Growing, and Sustaining Knowledge Graphs for the Long Haul,** International Workshop on Natural Language Processing for Knowledge Graph Construction (NLP4KGC) at the Web Conference'25, April-May, 2025
- **Trust, accountability, and autonomy in knowledge graph-based AI for self-determination** at the Journal Track at International Semantic Web Conference; November 2025
- **Decentralized AI for Personalized Healthcare** at the Department of Biostatistics and Health Data Science at Lehigh University's College of Health; Invited by Profs. Gideon Gogovi and Hsuan-Wei "Wayne" Lee; September 24, 2025; <https://eventscalendar.lehigh.edu/event/decentralized-ai-for-personalized-healthcare>
- **Explainable Risk and Coverage with Computable Insurance Contracts** for Clyde & Co CRAFT Meeting; September 9, 2025
- **Building Intelligent Systems for Finance, Insurance, and Decentralized Markets** at the Telfer School of Management, University of Ottawa, Canada; Invited by Prof. William van Woensel (see <https://telfer.uottawa.ca/en/events/202508151200-building-intelligent-systems-for-finance-insurance-and-decentralized-markets>; August 15, 2025

- **Bridging Resilient Accountable Intelligent Networked Systems** at the Petscraft Laboratoire d'Informatique Fondamentale d'Orléans (LIFO) seminar; Invited by Prof. Nicolas Anciaux; January 16, 2025
- **Decentralized Knowledge Graphs: A New Frontier for Web Data Intelligence** at the Data Intelligence and Knowledge Service Symposium; Invited by Prof. Fenghong Liu; December 15, 2024
- **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
- **The FoodKG Reimagined**, Knowledge Graph Conference'24, May 08, 2024
- **Synergistic Combinations of AI and Web3** at Past, Present and Future of Fintech @RPI – A Bicentennial Celebration; Chaired by Prof. Aparna Gupta; 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 ACM 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>
- **Enabling Trust in Clinical Decision Support Recommendations through Semantics**, at University of Melbourne, Melbourne, Australia; November 2019; Hosted by Prof. Karin Verspoor
- **Decentralized Applications Augmented with Learning and Semantics**, Deakin University, Melbourne Australia; November 2019; Hosted by Dr. Nirosheini 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**, RPI's Center for Financial Studies (CFS) Quantitative Finance Workshop 2019; Hosted by Prof. Aparna Gupta, September 2019
- **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
- **RDF-Powered Dialog Systems**, at TWEd RPI, October 2017
- **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

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

- **Future of Fintech**, at the CRAFT IAB Meeting at Stevens Institute of Technology, Hoboken, NJ on Oct 23, 2025
- **PhD Student Orientation Panel**, at RPI, on May 22, 2025
- **Web Science Trust Labs Network Panel**, at the Web Science Conference 2025, on May 22, 2025 at the Rutgers University, New Brunswick
- **Conference Preparation**, at Rensselaer Lunch and Learn Series on January 15, 2025 at RPI
- **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 ACM 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 Kolodziejcki, 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

University Service

- PhD Defense Committee Member for the following students: Bishwajit Saha (S'25), Bingsheng Yao (S'24), and Sola Shirai (S'24)
- PhD Candidacy Committee Member for the following students: Ronnakorn Rattanakornphan (S'26), Bolun Xia (S'25), Chibuikem Ezemaduka (F'24), Bishwajit Saha (S'24), Aaron Green (F'23), Bingsheng Yao (S'23), and Sola Shirai (S'23)
- PhD Research Qualifying Exam Committee Member for the following students: Sanjay Chari (S'26), Michael Zuo (S'25), Danielle Villa (F'24), Bao Pham (S'23), Vijay Sadashivaiah (F'22)
- Masters Defense Committee Member for the following students: Hannah Powers (S'25), and Matthew Pisano (S'24)
- Member, RPI Logic Center Steering Committee 2024 Summer - Present
- Member, RPI Computer Science Department's AI in CS Education Committee F'25 - Present
- Member, RPI Computer Science Department's Colloquium Committee F'23 - Present
- Member, RPI Computer Science Department's Graduate Admissions Committee F'22 - S'25
- Member, RPI Computer Science Department's Diversity, Equity and Inclusion Committee F'22 - S'25
- Member, RPI Lally School Management's Faculty Search Committee S'22
- Member, Rensselaer Institute for Data Exploration and Applications (IDEA) F'17 - Present
- Member, Rensselaer Center for Materials, Devices, and Integrated Systems (CMDIS) S'22 - Present
- Member, 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

- Deputy Chair, Web Science Trust Network (WSTNet) 2024 - Present
- Member, OriginTrail ChatDKG Steering Committee 2023 - Present
- Member, 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

- In-Use Track Co-Chair, International Semantic Web Conference 2026
- Program Co-Chair, History of the Web Track, ACM Web Conference 2025 and 2026
- Steering Committee Member, International Conference on Knowledge Capture (K-CAP) 2024 - 2027
- Program Co-Chair, ACM Web Science Conference 2024 and 2022
- Doctoral Consortium Co-Chair, International Semantic Web Conference 2022
- Poster and Demo Co-Chair, International Semantic Web Conference 2021
- Proceedings Chair, International Semantic Web Conference 2020
- Workshop and Tutorials Co-Chair, ACM Conference on Web Science 2020 and 2021
- Student Coordinator Co-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 & Event Organization

- Co-Facilitator of Brave Conversations Colombo (<https://www.braveconversations.org/event/ucsccolombo2025>) 2025
- Lead Organizer of FinSurvival Challenge at the ACM AI in Finance Conference (<https://finsurvival.github.io>) 2025
- 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

- AI for Resilient & Responsible DeFi Dynamics at the IEEE International Conference on Blockchain and Cryptocurrency (AI-R2D2) (<https://ai-r2d2.github.io>) 2026
- Trust Autonomy and Accountability in PKG-Based Agentic AI (TAAPAAI) Workshop at the European Semantic Web Conference (<https://taapaa.github.io>) 2026
- Trust Autonomy and Accountability in PKG-Based Agentic AI (TAPAI) Dagstuhl-Style Workshop at the International Semantic Web Conference (<https://tapai-iswc25.github.io>) 2025
- AI for Resilient & Responsible DeFi Dynamics (AI-R2D2) at ACM AI and Finance Conference 2025, Singapore (<https://ai-r2d2.github.io/ICAIF2025>) 2025
- Ethical Web Science Workshop at the Web Science Conference 2025
- Human-GenAI Interactions: Shaping the Future of Web Science at the Knowledge Graph Conference 2025
- 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 - 2024

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>

Competition / Hackathon Organization

- “FinSurvival Challenge” at the International Conference on AI and Finance — Sep 15 - Nov 15, 2025 <https://finsurvival.github.io>
- “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 - 2025
- Journal of Web Semantics 2018 - 2023

Journal Paper Reviewing

- Festschrift for Gul Agha, ACM Computing Surveys 2025
- Proceedings of the National Academy of Sciences (PNAS) Nexus 2025
- 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
- Springer Nature BMC Medicine 2022
- IEEE Internet Computing 2022
- ACM Computing Surveys 2022
- IEEE Transactions in Engineering Management Journal 2019
- Computingreviews.com 2012 - 2014
- IEEE Information Systems 2009

Conference Paper Reviewing

- European Semantic Web Conference - Research and In-use Tracks 2025
- ACM International Conference on AI & Finance 2025
- MIT (AI&EDU) 2025
- 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
- ACM Web Conference History of the Web Track 2024 and 2023
- ACM 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
- ACM 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

- ISWC Workshop on Ontology Patterns 2025
- AAAI Fall Symposium on Quantum Information & Machine Learning 2025
- 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

- Session Chair (Knowledge Graphs), International Semantic Web Conference, Nara, Japan 2025
- Session Chair (ML: Federated Learning), International Joint Conference on Artificial Intelligence, Montreal, Canada 2025
- 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

Inwon Kang	F'22 - Present
Fernando Spadea	S'23 - Present
Maruf Ahmed Mridul	F'23 - Present
Md Saikat Islam Khan	F'23 - Present
Jui Chien Lin	F'25 - Present
Nipun Pathirage (<i>Primary-Advisor: Deborah McGuinness</i>)	Su'25 - Present

Masters Students

	<i>Project</i>	<i>Semesters</i>
Faizaan Ali	AI Accountability through Data Provenance and Decentralized Knowledge Graphs	F'25 - S'26
Lorenzo Carta	FairFed: Ensuring Ethical and Safe Decisions in Federated Financial AI	S'26 - F'26
Abhirup Dasgupta	Learning Shared Ontologies in Federated Settings for Explainable Recommendation	S'26 - F'26

Undergraduate Research Students

	<i>Project</i>	<i>Semesters</i>
Lorenzo Carta	Private Financial Data Pods for AI-Powered Decision Making	Su'25 - S'26
Abid Talukder	Automated Generation of Computable Insurance Contracts	Su'25 - S'26
Abhirup Dasgupta	Constructing Personal Knowledge Graphs from Natural Language Conversations	F'25 - S'26

PAST STUDENT RESEARCHERS

PhD Student (As Co-Chair)

	<i>Advisor</i>	<i>Project/Thesis</i>	<i>First Position</i>	<i>Semesters</i>
Shruthi Chari	Deborah McGuinness	An Ontology-Enabled Approach For User-Centered and Knowledge-Enabled Explanations of AI Systems	Research Scientist at Bristol Myers Squibb	F'18 - Su'24

Masters Students

	<i>Project</i>	<i>First Position</i>	<i>Semesters</i>
Justin Ottesen	General Swarm Contract Simulator	Machine Learning Engineer, Deeli AI	F'24 - F'25
Joshua Carson Youngbar	Knowledge Graph Embedding Exploration	Technical Intern, Advanced Research Associates	S'25 - F'25
Yu-Kai Wang	Text-Summarization Quality Evaluator	Machine Learning Engineer, Deeli AI	F'24 - S'25
Samyuth Sagi	EmSights		S'24 - S'25
Aarnav Patel	Swarm Contracts	Software Engineer, Lockheed Martin	F'24 - S'25
Brendan Capuzzo	Explanations for Mobile AI	Software Engineer, Microsoft	S'24 - F'24
Matthew Uryga	DeFi Analysis	Software Engineer, Goldman Sachs	F'23 - S'24

Undergraduate Research Students

<i>Project</i>	<i>Semesters</i>
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Xin Meng	Gap and Overlap Analysis in Computable Insurance Policies	F'25
Sagar Sahu	Two-Way Traceability for Hybrid Insurance Contracts and Explainable Risk Analysis	F'25
Kaiyang Chang	CRAFT Blockchain Interoperability & Smart Derivatives Contract Encoding	S'24 - Su'25
Samir Beall	Large Transaction Model	Su'25
Bijun Wu	Federated LLMs	F'24 - S'25
Faizaan Ali	Data Provenance for AI Model Training	F'24 - S'25
Chengyu Zhang	Privacy for Vertical Federated Learning	F'24
Siddhant Agarwal	Explainability for Mobile AI	F'24
Albert Bao	AI Model Safety	F'24
Ashley Chan	EmSights	F'24
Tripp Lyons	Flow Matching for Data Compression & Blockchain Interoperability	F'24 and F'23
Joshua Moskoff	Smart Derivatives Contracts	F'24
Suhas Palwai	Automating Financial Contracts	F'24
Daniel Obolensky	Tracing AI Training Data	F'24
Max Zhang	Machine Unlearning for Privacy and Piracy	F'24
David Fong	MentalHealthAI	F'23 - S'24
Tianshu Chu	MentalHealthAI	F'23 - S'24
Matthew Merritt	Federated Learning with Explainability	S'24
Aarnav Patel	Swarm Contracts	F'23 - S'24
Samyuth Sagi	EMSights	S'23 - F'23
Manan Shukla	BlockIoT	F'19 - S'23
Kate Carbone	BlockIoT & Blockchain Interoperability	F'21 - S'23
Jared Gridley	Crypto Scam Detection	F'21 - S'23
John Cohen	Research Data Sharing	F'22 - S'23
Vishnu Kchittibhooma	Blockchain Interoperability	F'22 - S'23
Conor Flynn	DeFi Data Engine	S'23
Noah Kader	Web Cleanup!	S'23
Stanley Guo	Blockchain Interoperability	S'23
Jiawei Wu	Swarm Contracts	S'23
Haoran Bao	Swarm Contracts	S'23
Ryan Cheng	Swarm Contracts	S'23
Huy Chu	Explainable Mobile App Development	S'23
Megan Goulet	Explainable Mobile App Development & HEALS	Su'20 & S'23
Zhihan Chen	HEALS	Su'22 - F'22
Kacy Adams	Research Data Sharing	F'20 - F'22
Catherine Wang	Decentralized Social Network Analysis & Research Data Sharing	S'21 - F'22
Javier Marin-Maymi	BlockIoT	F'22
Griffin Dong	Blockchain Interoperability	F'22
Henry Liu	Algorand Blockchain Research	F'22
Jacky Xu	Algorand Blockchain Research	F'22
Noe Horowitz	Research Data Sharing	F'21 - S'22
Runxin Li	NFT Research	F'21 - S'22
Cindy Lyu	BlockIoT	Su'22
Juhi Gupta	BlockIoT	S'22
Junxi He	NFT Research	S'22
Junyi Wu	NFT Research	S'22
Qizhi (George) Lu	HEALS	Su'21 - S'22
Prasant Acharya	HEALS	Su'21 - F'21
Karthik Dusi	BlockIoT	F'21
Ruoyi (Jennifer) Zhan	Research Data Sharing	S'21 - F'21

Andrew Szoke	Research Data Sharing	S'21
Sahith Bhamidipati	Research Data Sharing	S'21
Jiahang Wang	SCALES	F'20 - S'21
Roman Vakhrushev	Federated Learning with Smart Contracts	F'20 - S'21
Kharn Nigam	Federated Learning with Smart Contracts	S'21
Benjamin Kelly	Research Data Sharing & HEALS	S'20 - F'20
Daniel Kazenoff	Crypto Scam Detection	F'19 - S'20
Yuheng Zhou	HEALS	S'20
Aaron Hill	HEALS	S'20
Ruisi Jian	HEALS	S'20
Samarth Patel	HEALS	S'20
Xingjian Zhao	SCALES	Su'19 - S'20
Shuze Liu	SCALES	F'18 - S'20
Yanlin Zhu	SCALES	F'18 - S'20
Robin Hong	SCALES	S'19
Gretchen Forbush	SCALES	Su'19 - S'20
Jade Franklin	HEALS	Su'19

PUBLICATIONS

Theses

1. **Oshani Seneviratne** (2014). "Accountable Systems: Enabling Appropriate Use of Information on the Web". PhD thesis. Massachusetts Institute of Technology. <http://hdl.handle.net/1721.1/93833>.
2. **Oshani Seneviratne** (2009). "Framework for Policy Aware Reuse of Content on the WWW". Mater's thesis. Massachusetts Institute of Technology. <http://hdl.handle.net/1721.1/53327>.

Books

1. **Oshani Seneviratne**, Jim Hendler (2023). *Linking the World's Information: Essays on Tim Berners-Lee's Invention of the World Wide Web*. ACM. <https://doi.org/10.1145/3591366.3591372>.
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>.

Book Chapters

1. Gjorgjina Cenikj, Mauro Dragoni, Tome Eftimov, Barbara Koroušić Seljak, Agnieszka Ławrynowicz, Fnu Mohbat, **Oshani Seneviratne**, Yoko Yamakata, Mohammed J. Zaki (2024). "Neurosymbolic Methods for Food Computing". In: *Frontiers in Artificial Intelligence and Applications: The Handbook on Neurosymbolic AI and Knowledge Graphs*. IOS Press, pp. 1019–1056. DOI: [10.3233/FAIA250242](https://doi.org/10.3233/FAIA250242).
2. Inwon Kang, William Van Woensel, **Oshani Seneviratne** (2024). "Using Large Language Models for Generating Smart Contracts for Health Insurance from Textual Policies". In: *AI for Health Equity and Fairness: Leveraging AI to Address Social Determinants of Health*. Ed. by A. Shaban-Nejad, M. Michalowski, and S. Bianco. Cham: Springer Nature Switzerland, pp. 129–146. ISBN: 978-3-031-63592-2. DOI: [10.1007/978-3-031-63592-2_11](https://doi.org/10.1007/978-3-031-63592-2_11).
3. **Oshani Seneviratne**, Manan Shukla (2023). "Personal health knowledge graph construction using Internet of Medical Things". In: *Personal Knowledge Graphs (PKG's): Methodology, tools and applications*. Computing. Institution of Engineering and Technology, pp.295–305. DOI: [10.1049/PBPC063E.ch13](https://doi.org/10.1049/PBPC063E.ch13).
4. **Oshani Seneviratne**, Amy van der Hiel, Lalana Kagal (2023). "Tim Berners-Lee's Research at the Decentralized Information Group at MIT". In: *Linking the World's Information: Essays on Tim Berners-Lee's Invention of the World Wide Web*. ACM, pp.201–213. <https://dl.acm.org/doi/10.1145/3591366.3591384>.
5. Ching-man Au Yeung, Ilaria Liccardi, Kanghao Lu, **Oshani Seneviratne**, Tim Berners-Lee (2023). "Decentralization: The Future of Online Social Networking". In: *Linking the World's Information: Essays on Tim Berners-Lee's Invention of the World Wide Web*. 1st ed. New York, NY, USA: Association for Computing Machinery, pp. 187–199. <https://doi.org/10.1145/3591366.3591383>.

6. Ching-Hua Chen, Daniel Gruen, Jonathan Harris, James Hendler, Deborah L. McGuinness, Marco Monti, Nidhi Rastogi, **Oshani Seneviratne**, Mohammed J. Zaki (2022). “Semantic Technologies for Clinically Relevant Personal Health Applications”. In: *Personal Health Informatics: Patient Participation in Precision Health*. Ed. by P.-Y. S. Hsueh, T. Wetter, and X. Zhu. Cham: Springer International Publishing, pp. 199–220. ISBN: 978-3-031-07696-1. DOI: [10.1007/978-3-031-07696-1_10](https://doi.org/10.1007/978-3-031-07696-1_10).
7. **Oshani Seneviratne** (2022). “Health Data Management for Internet of Medical Things”. In: *Women Securing the Future with TIPSS for Connected Healthcare: Trust, Identity, Privacy, Protection, Safety, Security*. Ed. by F. D. Hudson. Cham: Springer International Publishing, pp. 1–19. ISBN: 978-3-030-93592-4. DOI: [10.1007/978-3-030-93592-4_1](https://doi.org/10.1007/978-3-030-93592-4_1).
8. **Oshani W. Seneviratne** (2021). “Data Provenance and Accountability on the Web”. In: *Provenance in Data Science: From Data Models to Context-Aware Knowledge Graphs*. Ed. by L. F. Sikos, O. W. Seneviratne, and D. L. McGuinness. Cham: Springer International Publishing, pp. 11–24. ISBN: 978-3-030-67681-0. DOI: [10.1007/978-3-030-67681-0_2](https://doi.org/10.1007/978-3-030-67681-0_2).
9. Shruthi Chari, Dan Gruen, **Oshani Seneviratne**, Deborah L. McGuinness (2020). “Directions for Explainable Knowledge-Enabled Systems”. In: *Knowledge Graphs for Explainable Artificial Intelligence: Foundations, Applications and Challenges*. Vol. 47. IOS Press, pp. 245–261. DOI: [10.3233/SSW200022](https://doi.org/10.3233/SSW200022).
10. Shruthi Chari, Dan Gruen, **Oshani Seneviratne**, Deborah L. McGuinness (2020). “Foundations of Explainable Knowledge-Enabled Systems”. In: *Knowledge Graphs for Explainable Artificial Intelligence: Foundations, Applications and Challenges*. Vol. 47. IOS Press, pp. 23–48. DOI: [10.3233/SSW200010](https://doi.org/10.3233/SSW200010).
11. **Oshani Seneviratne** (2017). “Making Computer Science Attractive to High School Girls with Computational Thinking Approaches: A Case Study”. In: *Emerging Research, Practice, and Policy on Computational Thinking*. Ed. by P. J. Rich and C. B. Hodges. Cham: Springer International Publishing, pp. 21–32. ISBN: 978-3-319-52691-1. DOI: [10.1007/978-3-319-52691-1_2](https://doi.org/10.1007/978-3-319-52691-1_2).

Journal Papers

1. Inwon Kang, Parikshit Ram, Yi Zhou, Horst Samulowitz, **Oshani Seneviratne** (2025). On Learning Representations for Tabular Data Distillation. *Transactions on Machine Learning Research*.
2. W Van Woensel, **O Seneviratne** (2025). Semantic Interoperability on Blockchain by Generating Smart Contracts Based on Knowledge Graphs. *Blockchain: Research and Applications*, 100320. ISSN: 2096-7209. DOI: <https://doi.org/10.1016/j.bcr.2025.100320>.
3. Shruthi Chari, **Oshani Seneviratne**, Mohamed Ghalwash, Sola Shirai, Daniel M. Gruen, Pablo Meyer, Prithwish Chakraborty, Deborah L. McGuinness (2024). Explanation Ontology: A general-purpose, semantic representation for supporting user-centered explanations. *Semantic Web* **15**(4), 959–989. DOI: [10.3233/SW-233282](https://doi.org/10.3233/SW-233282). eprint: <https://doi.org/10.3233/SW-233282>.
4. Shruthi Chari, Prasant Acharya, Daniel M. Gruen, Olivia Zhang, Elif K. Eyigoz, Mohamed Ghalwash, **Oshani Seneviratne**, Fernando Suarez Saiz, Pablo Meyer, Prithwish Chakraborty, Deborah L. McGuinness (2023). Informing clinical assessment by contextualizing post-hoc explanations of risk prediction models in type-2 diabetes. *Artificial Intelligence in Medicine* **137**, 102498. ISSN: 0933-3657. DOI: <https://doi.org/10.1016/j.artmed.2023.102498>.
5. Aaron M. Green, Michael P. Giannattasio, John S. Erickson, **Oshani Seneviratne**, Kristin P. Bennett (2023). DeFi Survival Analysis: Insights Into the Emerging Decentralized Financial Ecosystem. *ACM Distributed Ledger Technologies (DLT) Research and Practice*.
6. Luis-Daniel Ibáñez, John Domingue, Sabrina Kirrane, **Oshani Seneviratne**, Aisling Third, Maria-Esther Vidal (2023). Trust, Accountability, and Autonomy in Knowledge Graph-based AI for Self-determination. *Transactions on Graph Data and Knowledge (TGDK)* **1**(1), 9:1–9:32. DOI: [10.4230/TGDK.1.1.9](https://doi.org/10.4230/TGDK.1.1.9).
7. **Oshani Seneviratne**, Kacy Adams, Deborah L. McGuinness (2023). Accountable Bench-to-Bedside Data-Sharing Mechanism for Researchers. *ACM Transactions on Social Computing* **6**(3-4), 1–23.
8. **Oshani Seneviratne**, Amar K. Das, Shruthi Chari, Nkechinyere N. Agu, Sabbir M. Rashid, Jamie P. McCusker, Jade S. Franklin, Miao Qi, Kristin P. Bennett, Ching-Hua Chen, James A. Hendler, Deborah L. McGuinness (2023). Semantically Enabling Clinical Decision Support Recommendations. *Journal of Biomedical Semantics* **14**(1), 8.
9. Sola S. Shirai, **Oshani Seneviratne**, Minor E. Gordon, Ching-Hua Chen, Deborah L. McGuinness (2021). Identifying Ingredient Substitutions Using a Knowledge Graph of Food. *Frontiers in Artificial Intelligence* **3**. ISSN: 2624-8212. DOI: [10.3389/frai.2020.621766](https://doi.org/10.3389/frai.2020.621766).

Magazine Articles

1. Ching-Hua Chen, James Hendler, Sabbir Rashid, **Oshani Seneviratne**, Daby Sow, Biplav Srivastava (Nov. 2019). Reflections on Successful Research in Artificial Intelligence: An Introduction. *AI Magazine* 40(4), 3–5. DOI: [10.1609/aimag.v40i4.5188](https://doi.org/10.1609/aimag.v40i4.5188).
2. Yolanda Gil, Biplav Srivastava, Ching-Hua Chen, **Oshani Seneviratne** (Nov. 2019). Reflections on Successful Research in Artificial Intelligence: An Interview with Yolanda Gil. *AI Magazine* 40(4), 6–8. DOI: [10.3233/DS-170011](https://doi.org/10.3233/DS-170011).
3. Arvind Gupta, Biplav Srivastava, Daby Sow, Ching-Hua Chen, **Oshani Seneviratne** (Nov. 2019). Reflections on the Ingredients for Success in AI Research: An Interview with Arvind Gupta. *AI Magazine* 40(4), 24–27. DOI: [10.1609/aimag.v40i4.5187](https://doi.org/10.1609/aimag.v40i4.5187).

Conference Papers

1. Maruf Ahmed Mridul, **Oshani Seneviratne** (2025). Curriculum-Guided Reinforcement Learning for Synthesizing Gas-Efficient Financial Derivatives Contracts. In: *Proceedings of the 6th ACM International Conference on AI in Finance*. ICAIF '25. Association for Computing Machinery, pp.561–568. ISBN: 9798400722202. DOI: [10.1145/3768292.3770397](https://doi.org/10.1145/3768292.3770397).
2. Gautam Kishore Shahi, **Oshani Seneviratne**, Marc Spaniol (2025). SemCAFE: When Named Entities make the Difference—Assessing Web Source Reliability through Entity-level Analytics. In: *Proceedings of the 17th ACM Web Science Conference 2025*. Websci '25. Association for Computing Machinery, pp.148–157. ISBN: 9798400714832. DOI: [10.1145/3717867.3717880](https://doi.org/10.1145/3717867.3717880).
3. Fernando Spadea, **Oshani Seneviratne** (2025). Aligning Language Models with Investor and Market Behavior for Financial Recommendations. In: *Proceedings of the 6th ACM International Conference on AI in Finance*. New York, NY, USA: Association for Computing Machinery, pp.509–517. ISBN: 9798400722202. <https://doi.org/10.1145/3768292.3770399>.
4. Pengfei Zhang, Mohbat Fnu, Yutong Song, **Oshani Seneviratne**, Zhongqi Yang, Iman Azimi, Amir M. Rahmani (2025). Adaptive Constraint Relaxation in Personalized Nutrition Recommendations: An LLM-Driven Knowledge Graph Retrieval Approach. In: *AMIA Annual Symposium Proceedings*. American Medical Informatics Association. AMIA.
5. Maruf Ahmed Mridul, Ian Sloyan, Aparna Gupta, **Oshani Seneviratne** (Aug. 2025). AI4Contracts: LLM & RAG-Powered Encoding of Financial Derivative Contracts. In: IJCAI '25. (18% acceptance rate). Montreal, Canada: International Joint Conference on Artificial Intelligence. <https://arxiv.org/abs/2506.01063>.
6. Md Saikat Islam Khan Bappy, Aparna Gupta, **Oshani Seneviratne**, Stacy Patterson (2024). Fed-RD: Privacy-Preserving Federated Learning for Financial Crime Detection. In: *2024 IEEE Symposium on Computational Intelligence for Financial Engineering and Economics (CIFER)*, pp.1–9. DOI: [10.1109/CIFER62890.2024.10772978](https://doi.org/10.1109/CIFER62890.2024.10772978).
7. Mohamed Lashuel, Gulrukh Kurdistan, Aaron Green, John Erickson, **Oshani Seneviratne**, Kristin Bennett (2024). LLM-Based Code Generation for Querying Temporal Tabular Financial Data. In: *IEEE Computational Intelligence in Finance and Economic Conference (CIFER)*, pp.1–8. DOI: [10.1109/CIFER62890.2024.10772804](https://doi.org/10.1109/CIFER62890.2024.10772804).
8. Maruf Ahmed Mridul, Kaiyang Chang, Aparna Gupta, **Oshani Seneviratne** (2024). Smart Contracts, Smarter Payments: Innovating Cross Border Payments and Reporting Transactions. In: *IEEE Computational Intelligence in Finance and Economic Conference (CIFER)*, pp.1–8. DOI: [10.1109/CIFER62890.2024.10772792](https://doi.org/10.1109/CIFER62890.2024.10772792).
9. Fernando Spadea, **Oshani Seneviratne** (2024). Support and Scandals in GameFi DApps: A Network Analysis of The Sandbox Transactions. In: *2024 IEEE International Conference on Decentralized Applications and Infrastructures (DAPPS)*, pp.35–44. DOI: [10.1109/DAPPS61106.2024.00014](https://doi.org/10.1109/DAPPS61106.2024.00014).
10. Noah Kader, Inwon Kang, **Oshani Seneviratne** (Nov. 2024). Enhancing Web Spam Detection Through a Blockchain-Enabled Crowdsourcing Mechanism. In: *Web Information Systems Engineering – WISE 2024*. Ed. by M. Barhamgi, H. Wang, and X. Wang. Singapore: Springer Nature Singapore, pp.485–499. ISBN: 978-981-96-0576-7. https://doi.org/10.1007/978-981-96-0576-7_35.
11. **Oshani Seneviratne** (Nov. 2024). The Feasibility of a Smart Contract “Kill Switch”. In: *The Sixth International Conference on Blockchain Computing and Applications (BCCA 2024)*. IEEE. <https://arxiv.org/abs/2407.10302>.
12. Linh Tran, Sanjay Chari, Md. Saikat Islam Khan, Aaron Zachariah, Stacy Patterson, **Oshani Seneviratne** (June 2024). A Differentially Private Blockchain-Based Approach for Vertical Federated Learning. In: *2024 IEEE International Conference on Decentralized Applications and Infrastructures (DAPPS)*, pp.86–92. DOI: [10.1109/DAPPS61106.2024.00020](https://doi.org/10.1109/DAPPS61106.2024.00020).
13. David Fong, Tianshu Chu, Matthew Heflin, Xiaosi Gu, **Oshani Seneviratne** (May 2024). Predicting Depression and Anxiety: A Multi-Layer Perceptron for Analyzing COVID-19 Mental Health Impact. In: *2024 8th International Conference on Medical and Health Informatics (ICMHI 2024)*. Association for Computing Machinery. Yokohama, Japan.

14. Inwon Kang, Maruf Ahmed Mridul, Abraham Sanders, Yao Ma, Thilanka Munasinghe, Aparna Gupta, **Oshani Seneviratne** (May 2024). Deciphering Crypto Twitter. In: *Proceedings of the 16th ACM Web Science Conference*. WEBSCI '24. Stuttgart, Germany: Association for Computing Machinery, pp.331–342. DOI: [10.1145/3614419.3644026](https://doi.org/10.1145/3614419.3644026).
15. Aaron Green, Christopher Cammilleri, John S. Erickson, **Oshani Seneviratne**, Kristin P. Bennett (2023). DeFi Survival Analysis: Insights into Risks and User Behaviors. In: *Mathematical Research for Blockchain Economy*. Ed. by P. Pardalos, I. Kotsireas, Y. Guo, and W. Knottenbelt. Cham: Springer International Publishing, pp.127–141. ISBN: 978-3-031-18679-0.
16. Aaron Green, Michael Giannattasio, Keran Wang, John S. Erickson, **Oshani Seneviratne**, Kristin P. Bennett (2023). Characterizing Common Quarterly Behaviors in DeFi Lending Protocols. In: *Mathematical Research for Blockchain Economy*. Ed. by P. Pardalos, I. Kotsireas, W. J. Knottenbelt, and S. Leonardos. Cham: Springer Nature Switzerland, pp.62–77. ISBN: 978-3-031-48731-6.
17. Sanjaya Mallikarachchi, Bonnie Ho, Iyad Kanj, **Oshani Seneviratne**, Isuru Godage (2023). Decentralized Framework for Collection and Secure Storage of Google Street View Data: Case Study. In: *IEEE IAS Global Conference on Emerging Technologies (GlobConET)*, pp.1–6. DOI: [10.1109/GlobConET56651.2023.10150089](https://doi.org/10.1109/GlobConET56651.2023.10150089).
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