

# Oshani Seneviratne

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## WORK EXPERIENCE

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### Rensselaer Polytechnic Institute

*Assistant Professor, Department of Computer Science*

*Associate Director, Tetherless World Constellation (TWC)*

*Director of Health Data Research, Institute for Data Exploration and Applications (IDEA)*

Troy, New York

*Aug 2022 – Present*

*Aug 2022 – Present*

*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.

*Senior Software Engineer & Tech Lead*

Irvine, California

*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

*Research Assistant*

Cambridge, Massachusetts

*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

*Lead Technology Instructor*

Manila, Philippines

*Jun 2012 – Aug 2012*

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

### MIT Accelerating Information Technology Innovation

*Lead Technology Instructor*

Nairobi, Kenya

*Jun 2011 – Aug 2011*

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

### WSO2 Inc.

*Software Engineering Intern*

Colombo, Sri Lanka

*Feb 2006 – Jul 2006*

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

## EDUCATION

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### Massachusetts Institute of Technology (MIT)

*Ph.D in Computer Science*

*S.M in Computer Science*

Cambridge, Massachusetts

*Sep 2009 – Aug 2014*

*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

*Web Science Research Exchange Student*

United Kingdom

*Jan 2009 & Summer 2009*

### University of Oxford

*Summer Doctoral Student at the Oxford Internet Institute*

United Kingdom

*Summer 2008*

### University of Moratuwa

*B.Sc. (Hons) in Computer Science and Engineering*

Moratuwa, Sri Lanka

*Jun 2003 – Jul 2007*

## TEACHING EXPERIENCE

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### Courses at RPI

<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 &amp; Su'11</i>
<i>Introduction to Computer Science, MIT Women's Technology Program</i>	<i>Su'10</i>

### Guest Lectures at RPI

<i>Graduate Skills - "Ethics and Reproducibility"</i>	<i>F'24 &amp; F'23</i>
<i>Blockchain Technologies at NSF CRAFT @RPI START Program for Community School Students</i>	<i>Su'24</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 &amp; S'19</i>
<i>Cognitive Computing</i>	<i>S'19 &amp; 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

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### 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

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**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

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**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/qkvjkw/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

## 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 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 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

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- **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 Kolodziejewski, 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 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](http://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 (AICchain) 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

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### PhD Students (As Chair)

Inwon Kang	F'22 - Present
Fernando Spadea	S'23 - Present
Maruf Ahmed Mridul	F'23 - Present
Md Saikat Islam Khan Bappy ( <i>Co-Chair: Stacy Patterson</i> )	F'23 - Present

### PhD Students (As Doctoral Committee Member)

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

### Masters Students

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

### Undergraduate Research Students

Siddhant Agarwal   <i>Project: Explainability for Mobile AI</i>	F'24
Faizaan Ali   <i>Project: Data Provenance for AI Model Training</i>	F'24 - S'25
Albert Bao   <i>Project: AI Model Safety</i>	F'24
Ashley Chan   <i>Project: EmSights</i>	F'24
Kaiyang Chang   <i>Project: CRAFT Blockchain Interoperability</i>	S'24 - F'24
Tripp Lyons   <i>Project: Flow Matching for Compression</i>	F'24
Joshua Moskoff   <i>Project: Smart Derivatives Contracts</i>	F'24
Suhas Palwai   <i>Project: Automating Financial Contracts</i>	F'24
Daniel Obolensky   <i>Project: Tracing AI Training Data</i>	F'24
Bijun Wu   <i>Project: Federated LLMs</i>	F'24
Max Zhang   <i>Project: Machine Unlearning for Privacy and Piracy</i>	F'24



## Independent Study Supervision

Justin Ottesen   <i>Project: Battlecode</i>	S'25
Chengyu Zhang   <i>Project: Privacy for Vertical Federated Learning</i>	F'24

## PAST STUDENT RESEARCHERS

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### PhD Student (As Co-Chair)

Shruthi Chari ( <i>Chair: Deborah McGuinness</i> ); <i>First Position: Research Scientist at BMS</i>	F'18 - Su'24
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### PhD Students (As Doctoral Committee Member)

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

### Masters Students (As Primary Advisor)

Matthew Uryga   <i>Project: DeFi Analysis; First Position: Software Engineer at Goldman Sachs</i>	F'23 - S'24
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### Masters Students (As Thesis Committee Member)

Matthew Pisano   <i>Project: Jailbreaking LLMs</i>	F'23 - S'24
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## Undergraduate Research Students

David Fong   <i>Project: MentalHealthAI</i>	F'23 - S'24
Tianshu Chu   <i>Project: MentalHealthAI</i>	F'23 - S'24
Matthew Merritt   <i>Project: Federated Learning with Explainability</i>	S'24
Tripp Lyons   <i>Project: Blockchain Interoperability</i>	F'23
Samyuth Sagi   <i>Project: EMSights</i>	S'23 - F'23
Aarnav Patel   <i>Project: Swarm Contracts</i>	F'23 - S'24
Manan Shukla   <i>Project: BlockIoT</i>	F'19 - S'23
Kate Carbone   <i>Projects: BlockIoT &amp; Blockchain Interoperability</i>	F'21 - S'23
Jared Gridley   <i>Project: Crypto Scam Detection</i>	F'21 - S'23
John Cohen   <i>Project: Research Data Sharing</i>	F'22 - S'23
Vishnu Kchittibhooma   <i>Project: Blockchain Interoperability</i>	F'22 - S'23
Conor Flynn   <i>Project: DeFi Data Engine</i>	S'23
Noah Kader   <i>Project: Web Cleanup!</i>	S'23
Stanley Guo   <i>Project: Blockchain Interoperability</i>	S'23
Jiawei Wu   <i>Project: Swarm Contracts</i>	S'23
Haoran Bao   <i>Project: Swarm Contracts</i>	S'23
Ryan Cheng   <i>Project: Swarm Contracts</i>	S'23
Huy Chu   <i>Project: Explainable Mobile App Development</i>	S'23
Megan Goulet   <i>Projects: Explainable Mobile App Development &amp; HEALS</i>	Su'20 & S'23
Zhihan Chen   <i>Project: HEALS</i>	Su'22 - F'22
Kacy Adams   <i>Project: Research Data Sharing</i>	F'20 - F'22
Catherine Wang   <i>Project: Decentralized Social Network Analysis &amp; Research Data Sharing</i>	S'21 - F'22
Javier Marin-Maymi   <i>Project: BlockIoT</i>	F'22
Griffin Dong   <i>Project: Blockchain Interoperability</i>	F'22
Henry Liu   <i>Project: Algorand Blockchain Research</i>	F'22
Jacky Xu   <i>Project: Algorand Blockchain Research</i>	F'22
Noe Horowitz   <i>Project: Research Data Sharing</i>	F'21 - S'22
Runxin Li   <i>Project: NFT Research</i>	F'21 - S'22

Cindy Lyu   <i>Project: BlockIoT</i>	Su'22
Juhi Gupta   <i>Project: BlockIoT</i>	S'22
Junxi He   <i>Project: NFT Research</i>	S'22
Junyi Wu   <i>Project: NFT Research</i>	S'22
Qizhi (George) Lu   <i>Project: HEALS</i>	Su'21 - S'22
Prasant Acharya   <i>Project: HEALS</i>	Su'21 - F'21
Karthik Dusi   <i>Project: BlockIoT</i>	F'21
Ruoyi (Jennifer) Zhan   <i>Project: Research Data Sharing</i>	S'21 - F'21
Andrew Szoke   <i>Project: Research Data Sharing</i>	S'21
Sahith Bhamidipati   <i>Project: Research Data Sharing</i>	S'21
Jiahang Wang   <i>Project: SCALES</i>	F'20 - S'21
Roman Vakhrushev   <i>Project: Federated Learning with Smart Contracts</i>	F'20 - S'21
Kharn Nigam   <i>Project: Federated Learning with Smart Contracts</i>	S'21
Benjamin Kelly   <i>Project: Research Data Sharing &amp; HEALS</i>	S'20 - F'20
Daniel Kazenoff   <i>Project: Crypto Scam Detection</i>	F'19 - S'20
Yuheng Zhou   <i>Project: HEALS</i>	S'20
Aaron Hill   <i>Project: HEALS</i>	S'20
Ruisi Jian   <i>Project: HEALS</i>	S'20
Samarth Patel   <i>Project: HEALS</i>	S'20
Xingjian Zhao   <i>Project: SCALES</i>	Su'19 - S'20
Shuze Liu   <i>Project: SCALES</i>	F'18 - S'20
Yanlin Zhu   <i>Project: SCALES</i>	F'18 - S'20
Robin Hong   <i>Project: SCALES</i>	S'19
Gretchen Forbush   <i>Project: SCALES</i>	Su'19 - S'20
Jade Franklin   <i>Project: HEALS</i>	Su'19

## PUBLICATIONS

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### Thesis

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.
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 TIPPSS 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).
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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. 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>.
2. Shruthi Chari, **Oshani Seneviratne**, Mohamed Ghalwash, Sola Shirai, Daniel M. Gruen, Pablo Meyer, Prithwish Chakraborty, Deborah L McGuinness (2023). Explanation Ontology: A General-Purpose, Semantic Representation for Supporting User-Centered Explanations. *Semantic Web Journal*, 1–31.
3. 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*.
4. 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).
5. **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.
6. **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.
7. 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. Md Saikat Islam Khan Bappy, Aparna Gupta, **Oshani Seneviratne**, Stacy Patterson (Oct. 2024). Fed-RD: Privacy-Preserving Federated Learning for Financial Crime Detection. In: *IEEE Computational Intelligence in Finance and Economic Conference (CIFER)*. IEEE.
2. David Fong, Tianshu Chu, Matthew Heflin, Xiaosi Gu, **Oshani Seneviratne** (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.
3. Noah Kader, Inwon Kang, **Oshani Seneviratne** (Nov. 2024). Enhancing Web Spam Detection through a Blockchain-Enabled Crowdsourcing Mechanism. In: *The 25th International Web Information Systems Engineering conference (WISE)*.
4. Inwon Kang, Maruf Ahmed Mridul, Abraham Sanders, Yao Ma, Thilanka Munasinghe, Aparna Gupta, **Oshani Seneviratne** (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).
5. Mohamed Lashuel, Gulrukh Kurdistan, Aaron Green, John Erickson, **Oshani Seneviratne**, Kristin Bennett (Oct. 2024). LLM-Based Code Generation for Querying Temporal Tabular Financial Data. In: *IEEE Computational Intelligence in Finance and Economic Conference (CIFER)*. IEEE.
6. Maruf Ahmed Mridul, Kaiyang Chang, Aparna Gupta, **Oshani Seneviratne** (Oct. 2024). Smart Contracts, Smarter Payments: Innovating Cross Border Payments and Reporting Transactions. In: *IEEE Computational Intelligence in Finance and Economic Conference (CIFER)*. IEEE.
7. **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.
8. 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).
9. Linh Tran, Sanjay Chari, Md. Saikat Islam Khan, Aaron Zachariah, Stacy Patterson, **Oshani Seneviratne** (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).
10. Kacy Adams, Deborah McGuinness, **Oshani Seneviratne** (May 2023). Semantics-based Framework for Incentivized Research Data Sharing. In: vol. 36. 1. DOI: [10.32473/flairs.36.133374](https://doi.org/10.32473/flairs.36.133374).
11. 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.
12. 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.
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14. Sanjaya Mallikarachchi, Bonnie Ho, **Oshani Seneviratne**, Iyad Kanj, Isuru Godage (2023). Decentralized Data Collection via Swarm Contracts: Study on Crowd-Sourced Google Maps. In: *2023 9th International Conference on Control, Automation and Robotics (ICCAR)*, pp.141–146. DOI: [10.1109/ICCAR57134.2023.10151727](https://doi.org/10.1109/ICCAR57134.2023.10151727).



15. Matthew Pisano, Connor Patterson, **Oshani Seneviratne** (2023). PredictChain: Empowering Collaboration and Data Accessibility for AI in a Decentralized Blockchain-based Marketplace. In: *ChainScience 2023*. arXiv. eprint: [2307.15168](https://arxiv.org/html/2307.03277). <https://arxiv.org/html/2307.03277>.
16. Sabbir Rashid, Jamie McCusker, Daniel Gruen, **Oshani Seneviratne**, Deborah McGuinness (2023). A Concise Ontology to Support Research on Complex, Multimodal Clinical Reasoning. In: *The Semantic Web: 20th International Conference, ESWC 2023, Hersonissos, Crete, Greece, May 28–June 1, 2023, Proceedings*. Hersonissos, Greece: Springer-Verlag, pp.390–407. ISBN: 978-3-031-33454-2. DOI: [10.1007/978-3-031-33455-9\\_23](https://doi.org/10.1007/978-3-031-33455-9_23).
17. Manan Shukla, **Oshani Seneviratne** (Jan. 2023). MentalHealthAI: Utilizing Personal Health Device Data to Optimize Psychiatry Treatment. In: *AMIA Annual Symposium Proceedings*. eCollection 2023. American Medical Informatics Association. AMIA, pp.641–652. <https://pubmed.ncbi.nlm.nih.gov/38222418>.
18. Jared Gridley, **Oshani Seneviratne** (2022). Significant Digits: Using Large-Scale Blockchain Data to Predict Fraudulent Addresses. In: *2022 IEEE International Conference on Big Data (Big Data)*, pp.903–910. DOI: [10.1109/BigData55660.2022.10020971](https://doi.org/10.1109/BigData55660.2022.10020971).
19. Sanjaya Mallikarachchi, Can Dai, **Oshani Seneviratne**, Isuru Godage (2022). Managing Collaborative Tasks within Heterogeneous Robotic Swarms using Swarm Contracts. In: *2022 IEEE International Conference on Decentralized Applications and Infrastructures (DAPPS)*, pp.48–55. DOI: [10.1109/DAPPS55202.2022.00014](https://doi.org/10.1109/DAPPS55202.2022.00014).
20. **Oshani Seneviratne**, Deborah L. McGuinness (2022). Incentivized Research Data Sharing, Reusing and Repurposing with Blockchain Technologies. In: *55th Hawaii International Conference on System Sciences, HICSS 2022, Virtual Event / Maui, Hawaii, USA, January 4-7, 2022*. ScholarSpace, pp.1–10. <http://hdl.handle.net/10125/80231>.
21. Manan Shukla, Jianjing Lin, **Oshani Seneviratne** (2022). Collaboratively Learning Optimal Patient Outcomes Using Smart Contracts in Limited Data Settings. In: *IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies, CHASE 2022, Arlington, VA, USA, November 17-19, 2022*. IEEE, pp.133–137. <https://ieeexplore.ieee.org/document/9983613>.
22. William Van Woensel, Floriano Scioscia, Giuseppe Loseto, **Oshani Seneviratne**, Evan W. Patton, Samina Abidi, Lalana Kagal (2022). Explainable Clinical Decision Support: Towards Patient-Facing Explanations for Education and Long-Term Behavior Change. In: *Artificial Intelligence in Medicine - 20th International Conference on Artificial Intelligence in Medicine, AIME 2022, Halifax, NS, Canada, June 14-17, 2022, Proceedings*. Vol. 13263. Lecture Notes in Computer Science. Springer, pp.57–62. DOI: [10.1007/978-3-031-09342-5\\_6](https://doi.org/10.1007/978-3-031-09342-5_6).
23. Yufei Wu, Thilanka Munasinghe, Lydia Manikonda, **Oshani Seneviratne** (2022). Data-driven Analysis of Remote Work in China during the COVID-19 Pandemic. In: *55th Hawaii International Conference on System Sciences, HICSS 2022, Virtual Event / Maui, Hawaii, USA, January 4-7, 2022*. ScholarSpace, pp.1–10. <http://hdl.handle.net/10125/79676>.
24. Jonathan Grey, **Oshani Seneviratne**, Isuru Godage (2021). Blockchain-Based Mechanism for Robotic Cooperation Through Incentives: Prototype Application in Warehouse Automation. In: *2021 IEEE International Conference on Blockchain (Blockchain)*, pp.597–604. DOI: [10.1109/Blockchain53845.2021.00090](https://doi.org/10.1109/Blockchain53845.2021.00090).
25. Evan W. Patton, William Van Woensel, **Oshani Seneviratne**, Giuseppe Loseto, Floriano Scioscia, Lalana Kagal (2021). The Punya Platform: Building Mobile Research Apps with Linked Data and Semantic Features. In: *The Semantic Web – ISWC 2021*. Ed. by A. Hotho, E. Blomqvist, S. Dietze, A. Fokoue, Y. Ding, P. Barnaghi, A. Haller, M. Dragoni, and H. Alani. Cham: Springer International Publishing, pp.563–579. ISBN: 978-3-030-88361-4.
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28. Shruthi Chari, **Oshani Seneviratne**, Daniel M. Gruen, Morgan A. Foreman, Amar K. Das, Deborah L. McGuinness (2020). Explanation Ontology: A Model of Explanations for User-Centered AI. In: *The Semantic Web – ISWC 2020*. Ed. by J. Z. Pan, V. Tamma, C. d’Amato, K. Janowicz, B. Fu, A. Polleres, O. Seneviratne, and L. Kagal. Cham: Springer International Publishing, pp.228–243. ISBN: 978-3-030-62466-8.
29. Jade Franklin, Shruthi Chari, Morgan A Foreman, **Oshani Seneviratne**, Daniel M Gruen, James P McCusker, Amar K Das, Deborah L McGuinness (Jan. 2020). Knowledge Extraction of Cohort Characteristics in Research Publications. In: *AMIA Annual Symposium Proceedings*. Vol. 2020. eCollection 2020. American Medical Informatics Association, pp.462–471. <https://pubmed.ncbi.nlm.nih.gov/33936419>.
30. Jonathan Grey, Isuru Godage, **Oshani Seneviratne** (2020). Swarm Contracts: Smart Contracts in Robotic Swarms with Varying Agent Behavior. In: *2020 IEEE International Conference on Blockchain (Blockchain)*, pp.265–272. DOI: [10.1109/Blockchain50366.2020.00040](https://doi.org/10.1109/Blockchain50366.2020.00040).



31. Aparna Gupta, Jyothsna Harithsa, **Oshani Seneviratne** (2020). A Descriptive Analysis of US Initial Coin Offerings. In: *2020 2nd Conference on Blockchain Research & Applications for Innovative Networks and Services (BRAINS)*, pp.144–151. DOI: [10.1109/BRAINS49436.2020.9223270](https://doi.org/10.1109/BRAINS49436.2020.9223270).
32. Shruthi Chari, Miao Qi, Nkechinyere N. Agu, **Oshani Seneviratne**, Jamie P. McCusker, Kristin P. Bennett, Amar K. Das, Deborah L. McGuinness (2019). Making Study Populations Visible Through Knowledge Graphs. In: *The Semantic Web – ISWC 2019*. Ed. by C. Ghidini, O. Hartig, M. Maleshkova, V. Svátek, I. Cruz, A. Hogan, J. Song, M. Lefrançois, and F. Gandon. Cham: Springer International Publishing, pp.53–68. ISBN: 978-3-030-30796-7.
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## Poster Papers

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## Demo Papers

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## Technical Reports

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## Patent

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