

CURRICULUM VITAE

Xiao Luo
Associate Professor
Department of Computer Information Technology
Purdue School of Engineering and Technology
Indiana University-Purdue University Indianapolis (IUPUI)
Indianapolis, IN 46202
Tel: 317-278-7330, Email: luo25@iupui.edu
Website: <https://luo25.pages.iu.edu/index.html>

RESEARCH AREAS

Natural Language Processing, Information Retrieval, Artificial Intelligence, and biomedical informatics.

EDUCATION

- 2009 Ph.D. of Computer Science Dalhousie University, Canada
- 1999 Bachelor of Computer Science Huazhong University of Science and Technology, China

ACADEMIC/PROFESSIONAL APPOINTMENTS

- 08/2022 - present Associate Professor, Department of Computer Information Technology, IUPUI
- 08/2018 - present Chair of Graduate Education, Department of Computer Information Technology, IUPUI
- 08/2022 - present Adjunct Professor, Department of Computer and Information Science, IUPUI
- 08/2017 - present Adjunct Professor, Department of Electric and Computer Engineering, IUPUI
- 08/2021 - present Adjunct Professor, Faculty of Computer Science, Dalhousie University
- 08/2016 - 07/2022 Tenure-Track Assistant Professor, Department of Computer Information Technology, IUPUI
- 05/2015 - 07/2016 Adjunct Instructor, Faculty of Computer Science, Dalhousie University
- 08/2014 - 07/2016 Post-Doc Fellow, Faculty of Computer Science, Dalhousie University
- 05/2010 - 07/2016 Data Engineer, Health and Wellness Nova Scotia, Canada
- 07/2009 - 04/2010 Research Officer, National Research Council of Canada

AWARDS AND HONORS

- 2021 Trustees Teaching Award, IUPUI
- 2019 ACM International Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB) Best Paper Award
- 2019 International Conference on Human-Computer Interaction (HCI) Best Paper Award
- 2003 Graduate Thesis Student Conference Travel Award, Dalhousie University

PUBLICATIONS (Supervised Students Are Noted With *)

Peer-Reviewed Journal Publications

- Susan Storey, **Xiao Luo**, Jie Ren, Kun Huang, Diana Von Ah, “Symptom clusters of colorectal cancer survivors with diabetes over time”, *Oncology Nursing Forum*, (to appear), 2023
- Susan Storey, **Xiao Luo**, Susan Ofner, Susan M. Perkins, Diane Von Ah, “Hyperglycemia, Symptoms, and Symptom Clusters in Colorectal Cancer Survivors with Type 2 Diabetes”, *Supportive Care in Cancer*, 2022
- Md. Ahsanul Kabir, Aljohara Fahad Almulhim, **Xiao Luo**, and Mohammad A Hasan, “Informative Causality Extraction from Medical Literature via Dependency-tree based Patterns”, *Journal of Healthcare Informatics Research*, 2022
- Wei Shao, **Xiao Luo**, Zuoyi Zhang, Zhi Han, Vasu Chandrasekaran, Vladimir Turzhitsky, Vishal Bali, Anna R. Roberts, Megan Metzger, Jarod Baker, Carmen La Rosa, Jessica Weaver, Paul Dexter, and Kun Huang, “Application of Unsupervised Deep Learning Algorithms for Identification of Specific Clusters of Chronic Cough Patients from EMR Data”, *BMC Bioinformatics*, 2022
- Alan P. Sawchuk, Weichen Hong, John Talamantes, Mayfuzull Islam, **Xiao Luo**, Huidan Yu, “Predictive ability of the Renal Resistive Index and its Relationship to Duplex Ultrasound Waveform Propagation in the Aorta and Renal Arteries”, *Annals of Vascular Surgery*, 2022
- **Xiao Luo**, Priyanka Gandhi*, Susan Storey, and Kun Huang, “A Deep Language Model for Symptom Extraction from Clinical Text and Its Application to Extract COVID-19 symptoms from Social Media”, *IEEE Journal of Biomedical And Health Informatics*, 2022
- Susan Storey, Zuoyi Zhang, **Xiao Luo**, Megan Metzger, Amrutha Jakka, Kun Huang, and Diane Von Ah, “Differences in Health-related Outcomes and Utilization of Healthcare Resources in Breast Cancer Survivors with and without Type 2 Diabetes”, *Journal of Patient-Centered Research and Reviews*, 2022
- **Xiao Luo**, Priyanka Gandhi*, Susan Storey, Zuoyi Zhang, Zhi Han, and Kun Huang, “A Novel Framework to Analyze the Associations between Symptoms and Cancer Patient Attributes Post Chemotherapy using EHR data”, *IEEE Journal of Biomedical And Health Informatics*, 2021
- **Xiao Luo**, Priyanka Gandhi*, Wei Shao, Zuoyi Zhang, Zhi Han, Vasu Chandrasekaran, Vladimir Turzhitsky, Vishal Bali, Anna R. Roberts, Megan Metzger, Jarod Baker, Carmen La Rosa, Jessica Weaver, Paul Dexter, and Kun Huang, “Applying Interpretable Deep Learning Models to Identify Chronic Cough Patients using EHR Data”, *Computer Methods and Programs in Biomedicine*, 2021
- Haoran Ding*, **Xiao Luo**, “Attention-based Unsupervised Keyphrase Extraction and Phrase Graph for COVID-19 Medical Literature Retrieval”, *ACM Transactions on Computing for Healthcare*, 2021
- **Xiao Luo**, Lena Ara*, Haoran Ding*, David Rollins, Raghu Motaganahalli, Alan Sawchuk, “Computational Methods to Automate the Initial Interpretation of Lower Extremity Arterial Doppler and Duplex Carotid Ultrasound”, *Journal of Vascular Surgery*, 2021
- Zhan Zhang, Lukas Kmoth, **Xiao Luo**, and Zhe He, “User-Centered System Design for Communicating Clinical Laboratory Test Results: A Pilot Study”, *Journal of Medical Internet Research, Human Factors*, 2021
- Amirreza Salamat*, **Xiao Luo**, Ali Jafari, “HeteroGraphRec: A Heterogeneous Graph-Based Neural Networks for Social Recommendations”, *Knowledge-Based Systems*, 2021
- Susan Storey, Zuoyi Zhang, **Xiao Luo**, Diane Von Ah, Megan Metzger, Jie Zhang, Amrutha Jakka,

Kun Huang, “Association of Comorbid Diabetes With Clinical Outcomes and Healthcare Utilization in Colorectal Cancer Survivors”, *Oncology Nursing Forum*, 2021

- **Xiao Luo**, Susan Storey, Priyanka Gandhi*, Zuoyi Zhang, Megan Metzger, Kun Huang, “Analyzing the Symptoms in Colorectal and Breast Cancer Patients with or without Type 2 Diabetes using EHR Data”, *Health Informatics Journal*, 2021
- Zhe He, Fnu Erdengasileng, **Xiao Luo**, Aiwen Xing, Neil Charness, Jiang Bian, “How the clinical research community responded to the COVID-19 pandemic: An analysis of the COVID-19 clinical studies in ClinicalTrials.gov”, *Journal of the American Medical Informatics Association (JAMIA) Open*, 2021
- **Xiao Luo**, Chengchao Yao*, and Nur A. Zincir-Heywood, “Modelling and visualising SSH brute force attack behaviours through a hybrid learning framework”, *Int. Journal of Information and Computer Security*, 2021
- Zhan Zhang, Daniel Citardi, Aiwen Xing, **Xiao Luo**, Yu Lu, Zhe He, “Patients’ Challenges and Needs in Comprehending Lab Test Results: A Mixed-Methods Study”, *Journal of Medical Internet Research*, 2020
- **Xiao Luo**, Gregory Zimet, and Setu Shah*, “A Natural Language Processing Framework to analyse the opinions on HPV Vaccination Reflected in Twitter over 10 Years (2008 - 2017)”, *Human Vaccines & Immunotherapeutics*, 2019
- Setu Shah*, **Xiao Luo**, Saravanan Kanakasabai, Ricardo Tuason, and Gregory Klopper, “Neural Networks for Mining the Associations between Diseases and Symptoms in Clinical Notes”, *Health Information Science and Systems*, 2019
- Setu Shah* and **Xiao Luo**, “Concept Embedding based Weighting Scheme for Biomedical Text Clustering and Visualization”, *Applied Analytics*, 2018

Peer-Reviewed Conference Publications

- Cary Xiao*, Nam Pham*, Erik A. Imel, **Xiao Luo**, “Patient-GAT: Sarcopenia Prediction using Multimodal Data Fusion and Weighted Graph Attention Networks”, *38th ACM/SIGAPP Symposium On Applied Computing (ACM SAC)* (accepted), 2023
- Tahabi Fattah Muhammad*, Susan Storey, **Xiao Luo**, “SymptomGraph: Identifying Symptom Clusters from Narrative Clinical Notes using Graph Clustering”, *38th ACM/SIGAPP Symposium On Applied Computing (ACM SAC)* (accepted), 2023
- Haoran Ding* and **Xiao Luo**, “AGRank: Augmented Graph-based Unsupervised Keyphrase Extraction”, *Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and International Joint Conference on Natural Language Processing (ACL-IJCNLP)*, 2022
- Taotao Jing, Haifeng Xia, Renran Tian, Haoran Ding*, **Xiao Luo**, Joshua Domeyer, Rini Sherony, Zhengming Ding, “InAction: Interpretable Action Decision Making for Autonomous Driving”, *European Conference on Computer Vision (ECCV)*, 2022
- Alvar Esperanca* and **Xiao Luo**, “ReferEmo: A Referential Quasi-Multimodal Model for Multilabel Emotion Classification”, *33rd International Conference on Database and Expert Systems Applications (DEXA)*, 2022
- Md Fazle Elahi*, Renran Tian, **Xiao Luo**, “Flexible and Scalable Annotation Tool to Develop Scene Understanding Datasets”, *Workshop on Human-In-the-Loop Data Analytics Co-located with SIGMOD*, 2022

- Shamima Mithun, Morgan Vickery, **Xiao Luo**, “Flipped Instructional Design Factors in an Introductory and an Advanced Data Science Course”, *American Society for Engineering Education (ASEE) Annual Conference*, 2022
- Rob Elliott, **Xiao Luo**, “Learning Management System Analytics to Examine the Behavior of Students in High Enrollment STEM Courses During the Transition to Online Instruction”, *Proceedings of the 52th IEEE Frontiers in Education (FIE) Conference*, 2022
- Zhan Zhang, **Xiao Luo**, Richard Harris, Susanna George*, Jack Finkelstein, “Hands-Free Electronic Documentation in Emergency Care Work through Smart Glasses”, *iConference*, 2022
- Haoran Ding*, **Xiao Luo**, “AttentionRank: Unsupervised keyphrase Extraction using Self and Cross Attentions”, *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2021
- Sara Nouri*, **Xiao Luo**, “DeepNote-GNN: Predicting Hospital Readmission using Clinical Notes and Patient Network Under Review”, *ACM International Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB)*, 2021
- Jithesh Gagan Sreeram*, **Xiao Luo**, and Renran Tian, “Contextual and Behavior Factors Extraction from Pedestrian Encounter Scenes Using Deep Language Models”, *International Conference on Big Data Analytics and Knowledge Discovery (DaWaK)*, 2021
- Md Fazle Elahi*, Jithesh Gagan Sreeram*, **Xiao Luo**, and Renran Tian, “A Novel Adaptation of Information Extraction Algorithm to Process Natural Text Descriptions of Pedestrian Encounters”, *IEEE International Conference on Intelligent Transportation (ITSC)*, 2021
- **Xiao Luo**, Sahil Kumar*, and Natalie Lambert, “Neural Topic Modeling to Understand Breast Cancer Peer-to-peer Online Information Seeking at Diagnosis”, *IEEE International Conference on Biomedical and Health Informatics (BHI)*, 2021
- Shamima Mithun, Morgan Ann Vickery, and **Xiao Luo**, “Evaluating Factors for Effective Flipped Classroom Instruction in an Advanced Data Management Course”, *IEEE Frontiers in Education Conference (FIE)*, 2021
- Yu Lu, Katherine Min, Zhan Zhang, **Xiao Luo**, and Zhe He, “Pregnancy-Related Information Seeking in Online Health Communities: A Qualitative Study”, *International Conference, iConference*, 2021
- **Xiao Luo**, Haoran Ding*, Matthew Tang*, Priyanka Gandhi*, Zhan Zhang, and Zhe He, “Attention Mechanism with BERT for Content Annotation and Categorization of Pregnancy-Related Questions on a Community QA Site”, *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, 2020
- Yu Lu, **Xiao Luo**, Zhan Zhang, Haorang Ding* and Zhe He, “Retrieving Lab Test Related Questions from Social QA Sites by Combining Shallow Features and Deep Representations”, *American Medical Informatics Association (AMIA) Annual Symposium*, 2020
- Amirreza Salamat*, **Xiao Luo** and Ali Jafari, “BalNode2Vec: Balanced Random Walk based Versatile Feature Learning for Networks”, *Proceedings of the IEEE International Joint Conference on Neural Networks (IJCNN)*, 2020
- Shamima Mithun, **Xiao Luo**, “Design and Evaluate the Factors for Flipped Classrooms for Data Management Courses”, *IEEE Frontiers in Education Conference (FIE)*, 2020
- Rob Elliott, **Xiao Luo**, “Improving Student Global, International, and Intercultural Competencies via Disciplinary International Collaborative Experiences”, *IEEE Frontiers in Education Conference (FIE)*, 2020

- Md Fazle Elahi*, **Xiao Luo**, Renran Tian, “A Framework for Modeling Knowledge Graphs via Processing Natural Descriptions of Vehicle-Pedestrian Interactions”, *International Conference on Human-Computer Interaction*, 2020
- Md. Ahsanul Kabir*, **Xiao Luo**, “Unsupervised Learning for Network Flow based Anomaly Detection in the Era of Deep Learning”, *IEEE Conference on Big Data Computing Service (BDS)*, 2020
- Priyanka Gandhi*, **Xiao Luo**, Susan Storey, Zuoyi Zhang, Zhi Han, and Kun Huang, “Identifying Symptom Clusters in Breast Cancer and Colorectal Cancer Patients using EHR Data”, *ACM International Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB)*(**Best Paper Award**), 2019
- Priyanka Gandhi*, **Xiao Luo**, Renran Tian, “Modeling Vehicle-Pedestrian Encountering Risks in the Natural Driving Environment using Machine Learning Algorithms”, *International Conference on Human-Computer Interaction (HCI)* (**Best Paper Award**), 2019
- Shamima Mithun, **Xiao Luo**, “Incorporate Cross-Course Knowledge Integration into Computing Education”, *IEEE Frontiers in Education Conference (FIE)* , 2019
- **Xiao Luo**, Connie Justice, and Brandon Sorge, “Improving integrated education of data science and information security through cross-curricular activities”, *IEEE Frontiers in Education Conference (FIE)* , 2019
- Lena Ara*, **Xiao Luo**, “A Data-Driven Network Intrusion Detection Model based on Host Clustering and Integrated Learning: A Case Study on Botnet Detection”, *International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage (SpaCCS)*, 2019
- Lena Ara*, **Xiao Luo**, Alan Sawchuk and Dave Rollins, “Automate the Peripheral Arterial Disease Prediction in Lower Extremity Arterial Doppler Study using Machine Learning and Neural Networks”, *ACM International Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB)*, 2019
- Maia Iyer*, Christopher Zou* and **Xiao Luo**, “Incorporating Syntactic Dependencies into Semantic Word Vector Model for Medical Text Processing”, *IEEE International Conference on Bioinformatics and Bio-medicine (BIBM)*, 2018
- Setu Shah* and **Xiao Luo**, “Comparison of Deep Learning based Concept Representations for Biomedical Document Clustering”, *IEEE Conference on Biomedical and Health Informatics (BHI)*, 2018
- Erick Eduardo Bernal Martinez, Bella Oh, Feng Li and **Xiao Luo**, “Evading Deep Neural Network and Random Forest Classifiers by Generating Adversarial Samples”, *International Symposium on Foundations & Practice of Security*, 2018
- **Xiao Luo**, Connie Justice, “Improve Integrated Learning in Computer Information Technology through Cross-Curricular Instruction”, *ACM Special Interest Group on Information Technology Education (SIGITE)*, 2018
- Rob Elliott, **Xiao Luo**, “Improving the Global, International and Intercultural (GII) competencies of IT Students via Integrated Collaboration During Study Abroad”, *ACM Special Interest Group on Information Technology Education (SIGITE)*, 2018
- Lena Ara*, **Xiao Luo**, “Identify the Maximal Cluster of Hosts based on Data Fusion and Machine Learning Algorithms for Intrusion Detection”, *IEEE International Conference on Big Data Security on Cloud (BigDataSecurity)*, 2018
- Setu Shah* and **Xiao Luo**, “Comparison of Deep Learning based Concept Representations for Biomed-

ical Document Clustering”, *IEEE International Conference on Biomedical and Health Informatics (BHI)*, 2018

- Gulzhahan Oraz* and **Xiao Luo**, “County-level Geographic Distributions of Diabetes in Relation to Multiple Factors in the United States”, *IEEE International Conference on Biomedical and Health Informatics (BHI)*, 2018
- Ivana Terziyska*, Setu Shah* and **Xiao Luo**, “Are Recent Terrorism Trends Reflected in Social Media?”, *IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS)*, 2017
- Chengchao Yao*, **Xiao Luo**, Nur Zincir-Heywood, “Data Analytics for Modeling Attack Behaviors: A Case Study on SSH Brute Force Attacks” *IEEE Symposium on Computational Intelligence for Security and Defense Applications*, 2017
- Rushabh Vyas*, **Xiao Luo**, Nichole McFarland*, Connie Justice “Investigation of Malicious Portable Executable File Detection on the Network using Supervised Learning Techniques” *IFIP/IEEE International Workshop on Analytics for Network and Service Management*, 2017
- Weikeng (Robin) Chen*, **Xiao Luo**, A. Nur Zincir-Heywood “Exploring a Service-Based Normal Behaviour Profiling System for Botnet Detection” *IFIP/IEEE International Workshop on Analytics for Network and Service Management*, 2017
- Setu Shah* and **Xiao Luo**, “Extracting Modifiable Risk Factors from Narrative Preventive Healthcare Guidelines for EHR Integration”, *IEEE International Conference on BioInformatics and BioEngineering (BIBE)*, 2017
- Setu Shah* and **Xiao Luo**, “Exploring Diseases based Biomedical Document Clustering and Visualization using Self-Organizing Maps”, *IEEE International Conference on E-health Networking, Application and Services (HealthCom)*, 2017
- Setu Shah* and **Xiao Luo**, “Biomedical Document Clustering and Visualization based on the Concepts of Diseases”, *ACM KDD workshop on Data-Driven Discovery*, 2017
- **Xiao Luo**, “Analyzing the correlations between the uninsured and diabetes prevalence rates in geographic regions in the United States”, *IEEE/ACM CHASE BIGDATA4HEALTH*, 2017
- **Xiao Luo**, Revanth Nadasabapathy*, Nur Zincir-Heywood, Keith Gallant, and Janith Peduruge, “Predictive Analysis on Tracking Emails for Targeted Marketing” *International Conference on Discovery Science*, 2015
- Philip O’Brien, **Xiao Luo**, Tony Abou-Assaleh, and Shujie Li, “Personalization of Content Ranking in the Context of Local Search” *IEEE/WIC/ACM International Conferences on Web Intelligence and Intelligent Agent Technology*, 2009
- **Xiao Luo**, A. Nur Zincir-Heywood, “Incorporating Temporal Information for Document Classification” *IEEE International Conference on Data Engineering Workshop*, 2007
- **Xiao Luo**, A. Nur Zincir-Heywood, “Evolving Recurrent Linear-GP for Document Classification and Word Tracking” *Proceedings of IEEE World Congress on Computational Intelligence*, pp. 2436–2443, 2006
- **Xiao Luo**, Malcolm Heywood, and A. Nur Zincir-Heywood, “Benchmarking a Recurrent Linear GP Model on Prediction and Control Problems” *International Conference on Intelligent Computing*, 2006
- **Xiao Luo**, Nur Zincir-Heywood, “Comparison of a SOM Based Sequence Analysis System and Naive Bayesian Classifier for Spam Filtering” *IEEE Joint Conference on Neural Network (IJCNN)*, 2005

- **Xiao Luo**, Malcolm Heywood and Nur Zincir-Heywood, “Evolving Recurrent Models Using Linear GP”, *Genetic and Evolutionary Computation Conference (GECCO)*, 2005
- **Xiao Luo**, Nur Zincir-Heywood, “Evaluation of Two Systems on Multi-class Multi-label Document Classification”, *International Symposium on Methodologies for Intelligent Systems (ISMIS)*, 2005
- Bin Tang, Michael Shepherd, Malcolm I. Heywood, and **Xiao Luo**, “Comparing Dimension Reduction Techniques for Document Clustering”, *Conference of the Canadian Society for Computational Studies of Intelligence*, 2005
- **Xiao Luo**, Nur Zincir-Heywood, “Combining Word-based and Word Co-occurrence Based Sequence Analysis for Text Categorization”, *IEEE International conference on Machine Learning and Cybernetics*, 2004
- **Xiao Luo**, Nur Zincir-Heywood, “Capturing Temporal Sequences for Text Representation Using Hierarchical SOMs”, *International Conference on Machine Learning, Models, Technologies and Applications*, 2004
- **Xiao Luo**, Nur Zincir-Heywood, “Analyzing Temporal Sequences for Text Categorization”, *International Conference on Knowledge-Based and Intelligent Information and Engineering Systems*, 2004
- **Xiao Luo**, Nur Zincir-Heywood, “Evaluation of Three Dimensionality Reduction Techniques for Document Classification”, *Canadian Conference on Electrical and Computer Engineering*, 2004
- **Xiao Luo**, Nur Zincir-Heywood, “A Comparison of SOM Based Document Categorization Systems”, *IEEE Joint Conference on Neural Network (IJCNN)*, 2003

Peer-Reviewed Conference Abstracts

- Kathleen Adelgais, Allison Broad, Jan Leonard, Seth Wheeler*, Zhan Zhang, **Xiao Luo**, “Factors associated with Abusive Head Trauma in Young Children Presenting to Emergency Medical Services using Machine Learning, and Natural Language Processing”, *Western Pediatric Trauma Conference*, 2022
- Vishal Bali, **Xiao Luo**, Priyanka Gandhi*, Zuoyi Zhang, Wei Shao, Zhi Han, Vasu Chandrasekaran, Vladimir Turzhitsky, Anna Roberts, Megan Metzger, Jarod Baker, Carmen La Rosa, Jessica Weaver, Paul Dexter, and Kun Huang, “Comparing Machine Learning Models for Identifying Chronic Cough Using Diagnosis and Medication in the Electronic Health Records”, *Journal of Allergy and Clinical Immunology*, 2021
- Jonathan Schelfhout, **Xiao Luo**, Vasu Chandrasekaran, Vladimir Turzhitsky, Paul Dexter, Zhi Han, Zuoyi Zhang, Wei Shao, Anna Roberts, Megan Metzger, Jarod Baker, Carmen La Rosa, Jessica Weaver, Vishal Bali, and Kun Huang, “Unsupervised learning algorithm for chronic cough detection in the electronic health records (EHR) data”, *European Respiratory Society (ERS) International Congress*, 2020

EXTERNAL GRANTS AND CONTRACTS

Funded

- A personalized preventive care recommendation system by integrating guidelines with the EHR data (R15) (PI: Xiao Luo)
National Institute of Health, 2021-2024
Role: PI
\$460,252

- Indiana Center for Musculoskeletal Health Clinical Research Center (P30) (PI: Sharon Moe)
National Institute of Health, 2022-2027
Role: Co-I
\$3,927,665
- Sarcopenia: computable phenotypes and clinical outcomes (R01) (PI: Erik Imel)
National Institute of Health, 2020-2024
Role: Co-I
\$777,765
- NSF REU: Enhancing Undergraduate Experiences in Mobile Cloud and Data Security (PI: Feng Li)
National Science Foundation, 2018-2023
Role: Co-PI
\$381,000
- Symptom Clusters in Breast and Colorectal Cancer Survivors with Diabetes: An Analysis of Big Data (PI: Susan Storey)
Oncology Nursing Foundation, 2020-2022
Role: Co-PI
\$25,000
- Studying the Discrepancies in Road-Scene Understandings between Autonomous Driving System (ADS) and Human to Improve Trust in AI (Phase I and II) (PI: Renran Tian)
Toyota Motor North America, 2020-2022
Role: Co-PI
\$200,000
- Automate & Improve the Generalizability of Chronic Cough Identification through Deep Learning Algorithms (PI: Kun Huang)
Merck & Co., 2019-2020
Role: Co-I
\$224,086

Submitted

- Applying artificial intelligence techniques to predict the lower extremity bypass graft failure
National Institute of Health, 2023-2025
MPIs: **Xiao Luo**, Alan Sawchuk
\$233,152
- User-centered design of an AI-empowered decision support system for out-of-hospital treatment of pediatric patients
Agency for Healthcare Research and Quality, 2023-2028
Site PI: **Xiao Luo**, Collaboration with Pace University, University of Colorado, and Mount Sinai Hospital
\$316,703 (IUPUI share)
- SCH: An Automated Computational Framework for Noninvasive Stroke Prediction Using Clinical Data and Physics Driven Machine Learning
National Science Foundation, 2023-2027
PI: Whitney Yu, Co-PI: **Xiao Luo**, Xiaoping Du, Fuyong Xing, Alan Sawchuk
\$1,197,361
- IUSE: EDU: Improving the enrollment and retention of the underrepresented students in the comput-

ing program through mentorship and culturally relevant pedagogy
National Science Foundation, 2023-2026
PI: **Xiao Luo**, Co-PI: Shamima Mithun
\$393,718

INTERNAL GRANTS

Funded

- Towards a Collaborative Multi-Device AI-System to Enable Real-Time Patient Symptom Reporting (MPI: Xiao Luo, Sudip Vhaduri)
WL-IND Purdue Seed Grant, 2023-2025
Role: PI
\$50,000
- Predicting stroke and identifying high risk factors in patients with asymptomatic carotid stenosis (ACS) (PI: Xiao Luo)
IUPUI iAI seed funding, 2022-2023
Role: PI
\$23,500
- Examining the role of hyperglycemia on the symptom clusters of colorectal cancer survivors with type 2 diabetes (PI: Susan Storey)
Indiana University Simon Cancer Center, 2021-2022
Role: Co-I
\$44,793
- Analyzing the HPV vaccine-related beliefs, attitudes, behaviors from multiple data sources using advanced NLP techniques (PI: Xiao Luo)
IUPUI Office of the Vice Chancellor for Research, 2019-2020
Role: PI
\$34,906
- Design and Evaluate the Factors for a Flipped Classroom for Data Management Courses
IUPUI STEM Education Innovation (PI: Shamima Mithun) & Research Institute, 2019-2021
Role: Co-PI
\$29,895
- An Enhanced Online Tool – regSNPs-intron for iSNVs screening (PI: Xiao Luo)
IUPUI Multidisciplinary Undergraduate Research Institute, 2019
Role: PI
\$17,000
- Integrated Learning for Undergraduate Students in Computer Information Technology through Cross-Curricular Instruction Units and Projects: “Cross-Curricular I-UP” (PI: Xiao Luo)
IUPUI STEM Education Innovation & Research Institute, 2017-2019
Role: PI
\$30,000
- Enhance CIT Data-Management–Concentration Curriculum to Integrate Trending Database Technologies and Enforce Cross-Course Interaction (PI: Shamima Mithun)
IUPUI Center of Teaching & Learning, 2018-2019
Role: Co-PI
\$10,000

- Overseas Study Program Development Grants
IUPUI Office of the Vice President for International Affairs (PI: Rob Elliott), 2017-2018
Role: Co-PI
\$6,000
- RISE Curriculum Development Grant
IUPUI Center of Teaching & Learning (PI: Rob Elliott), 2017-2018
Role: Co-PI
\$5,000
- Internet of Things Collaboratory
IUPUI (PI: Mohamed El-Sharkawy), 2017-2018
Role: Co-PI
\$25,000
- EMPOWER: Integrating Preventive Care Guidelines into Primary Care EHR (PI: Xiao Luo)
IUPUI Office of the Vice Chancellor for Research, 2016-2017
Role: PI
\$10,000

COURSES TAUGHT

Undergraduate Courses

- CIT 42100 Big Data Analytics (new) (IUPUI)
- CIT 31400 NoSQL Database Design (new) (IUPUI)
- CSCI 1100 JAVA I (Dalhousie University)

Graduate Courses

- CIT 58100 Advanced Programming in IT (IUPUI)
- CIT 57800 Data Management and Analytics in Cloud (new course) (IUPUI)
- ECE 59500 Database Management Systems (new course) (IUPUI)
- CIT 51600 Database Security and Auditing (IUPUI)
- CIT 52600 Applied Data Analytics (new course) (IUPUI)

NEW MASTERS PROGRAM DEVELOPMENT

- MS Applied Data Analytics and Management (IUPUI)