MANOJ A. THOMAS

Personal Information

Associate Professor
Discipline of Business Information Systems, School of Business
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Education

- Doctor of Philosophy: Information Systems, Minor: Operations Research
  Virginia Commonwealth University, USA. 2008
- Master of Science: Information Systems
  Virginia Commonwealth University, USA. 2005
- Master of Business Administration
  Virginia Commonwealth University, USA. 1999
- Bachelor of Engineering: Electronics And Communication
  Bharathiar University, India, 1995

Research Interest

Emerging Technologies; Health Analytics; Knowledge Management; Data Management; Social Computing; Information and Communication Technologies for Development (ICT4D).

Refereed Journal Articles

Data Science:

- Li, Y., Thomas, M., and Liu, D. (2020) From Semantics to Pragmatics: Where IS Can Lead in Natural Language Processing (NLP) Research, *European Journal of Information Systems*. https://doi.org/10.1080/0960085X.2020.1816145
- Thomas, M., Cipolla, J., Lambert, B., and Carter, L. (2019) Data Management Maturity Assessment of Public Sector Agencies, *Government Information Quarterly*, 36(4). doi:10.1016/j.giq.2019.101401
- Li, Y., Thomas, M., and Osei-Bryson, K. (2017) Ontology-based Data Mining Model Management for Self-service Knowledge Discovery, *Information Systems Frontiers*, 19(4), pp. 925-943. doi:10.1007/s10796-016-9637-y
- Flory, L., Osei-Bryson, K., and Thomas, M. (2017) A New Web Personalization Decision-Support Artifact for Utility-Sensitive Customer Review Analysis, *Decision Support Systems*, 94, pp. 85-96, doi: 10.1016/j.dss.2016.11.003
- Li, Y., Thomas, M., and Osei-Bryson, K. (2016) A Snail Shell Model for Knowledge Discovery via Data Analytics, *Decision Support Systems*, 91, pp. 1 -12. doi:10.1016/j.dss.2016.07.003
- Li, Y., Thomas, M., Osei-Bryson, K., and Levy, J. (2016) Problem Formulation in Knowledge Discovery via Data Analytics (KDDA), *International Journal of Environmental Research and Public Health*, 13(12), 1245, doi:10.3390/ijerph13121245
- Thomas, M., and Alalwan, J. (2016) Designing a Semantic Tool to Evaluate Web Content of Government Websites, *International Journal of Public Administration in the Digital Age*, 3(2), pp. 19-36. doi:10.4018/ijpada.2016040102
- Wenger, M., Thomas, M., and Babb, J. (2013) Financial Reporting Comparability: Toward an XBRL Ontology of the FASB/IFRS Conceptual Framework, *International Journal of Electronic Finance*, 7 (1), pp.15-32. doi: 10.1504/ijef.2013.051754
- Alalwan, J., and Thomas, M. (2012) An Ontology-based Approach to Assess Records Management System, *e-Service Journal*, 8 (3).
- Thomas, M., Redmond, R., and Yoon, Y. (2009) Using Ontological Reasoning For An Adaptive E-Commerce Experience, *International Journal of Intelligent Information Technologies*, 5(4), pp. 41-52. doi: 10.4018/jiit.2009080703
- Thomas, M., Redmond, R., Yoon, Y., and Singh, R. (2005) A Semantic Approach to Monitor Business Process Performance, *Communications of the ACM*, Dec 2005, pp.55-59. doi: 10.1145/1101779.1101809

Emerging Technologies:

- Sandhu, R., Gomas, J., Thomas, M. A., and Oliveria, T., Unfolding The Popularity Of Video Conferencing Apps – A Privacy Calculus Perspective, *International Journal of Information Management*, doi:10.1016/j.ijinfomgt.2022.102569.
- Sequeiros, H., Oliveira, T., & Thomas, M. A. (2021). The Impact of IoT Smart Home Services on Psychological Well-Being, *Information Systems Frontiers*, pp.1-18.
- Oliveira, T., Martins, R., Sarker, S., Thomas, M., & Popovič, A. (2019). Understanding SaaS adoption: The moderating impact of the environment context, *International Journal of Information Management*, 49, pp.1-12. doi:10.1016/j.ijinfomgt.2019.02.009
- Martins, R., Oliveira, T., Thomas, Manoj., and Tomás, Sara (2019) Firms continuance intention on SaaS Use – An empirical study, *Information Technology & People*. doi: 10.1108/ITP-01-2018-0027
- Tomás, S., Thomas, M., and Oliveira, T. (2018) Evaluating the Impact of Virtualization Characteristics on SaaS Adoption, *Enterprise Information Systems*, 12(3), pp.259-278. doi: 10.1080/17517575.2017.1355484
- Martins, R., Oliveira, T., and Thomas, M. (2016) An Empirical Analysis to Assess the Determinants of SaaS Diffusion in Firms, *Computers in Human Behavior* 62, pp.19-33. doi:10.1016/j.chb.2016.03.049
- Olivera, T., Thomas, M., Goncalo, B., and Campos, F. (2016) Mobile Payment: Understanding the Determinants of Customer Adoption and Intention to Recommend the Technology, *Computers in Human Behavior*, 61, pp.404-414. doi:10.1016/j.chb.2016.03.030
- Thomas, M., Costa, D., and Olivera, T. (2016) Assessing the Role of IT-enabled Process Virtualization on Green IT adoption, *Information Systems Frontiers*, 18(4), pp. 693-710 doi: 10.1007/s10796-015-9556-3.
- Alalwan, J., Thomas, M., and Weistroffer, R. (2014) Decision Support Capabilities of Enterprise Content Management Systems: An Empirical Investigation, *Decision Support Systems*, 68, pp.39-48. doi:10.1016/j.dss.2014.09.002
- Olivera, T., Faria M., G., Thomas, M., and Popovič, A. (2014) Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM, *International Journal of Information Management*, 34(5), pp.689-703. doi: 10.1016/j.ijinfomgt.2014.06.004
- Olivera, T., Thomas, M., and Espadanal, M. (2014) Assessing the determinants of cloud computing adoption: An analysis of the manufacturing and services sectors, *Information & Management*, 51(5), pp.497-510. doi:10.1016/j.im.2014.03.006
- Thomas, M., Redmond, R., and Weistroffer, H.R. (2009) Moving To The Cloud: Transitioning From Client-Server To Service Architecture, *Journal of Service Science*, 2(1).
- Thomas, M., Andoh-Baidoo, F., Redmond, R., and Yoon, Y. (2009) Moving Beyond Traditional Emergency Response with VoiceXML, *Journal of Information Technology Theory And Application*, 10(1).

- Thomas, M., Redmond, R., and Yoon, Y. (2007) Extending Loosely Federated Information Systems Using Agent Technology, *International Journal of Intelligent Information Technologies*, 3(3), pp. 1-20. doi:10.4018/jiit.2007070101

Social computing:

- Thomas, M.A., Li, Y., Sistenich, V., Diango, K.N., and Kabongo, D. (2022) A Multi-Stakeholder Engagement Framework for Knowledge Management in ICT4D, *Journal of the Association for Information Science and Technology*. doi:10.1002/asi.24703
- Li, Y., Thomas, M. A., Stoner, D., and Rana, SJB (2020) Citizen-centric capacity development for ICT4D: the case of continuing medical education on a stick. *Information Technology for Development* pp.458-476.
- Thomas, M., Li, Y., and Oliveira, T. (2017) Nuances of Development Contexts for ICT4D Research in Least Developed Countries: An Empirical Investigation in Haiti, *Telematics and Informatics*, 34(7) pp.1093-1112 doi:10.1016/j.tele.2017.05.001
- Wood, V., and Thomas, M. (2017) Vulnerable Populations in Food Deserts: A Case Study, *International Journal of Pharmaceutical and Healthcare Marketing*, 11(2), pp.211-220. doi:10.1108/IJPHM-03-2017-0012
- Thomas, M., and Narayan, P. (2017) Reproductive Tract Infections: Attitude and Barriers Among Marginalized Fisher Women In Kerala, South India, *Healthcare for Women International*, 38(4), pp. 361-378, doi:10.1080/07399332.2017.1279616
- Janjua, N., Li, Yan., and Thomas, M. (2017) Developing Information and Communication Technologies for Education in Haiti, *VA Engage Journal*, 5(3).
- Thomas, M., and Narayan, P. (2016) The Role of Participatory Communication in Tracking Unreported Reproductive Tract Issues in Marginalized Communities, *Information Technology for Development*, 22(1) pp.117-133. doi: 10.1080/02681102.2014.886549
- Thomas, M., Narayan, P., and Christian, C. (2012) Mitigating Reproductive Health Reporting Gaps in Outlier Communities - A Mobile Phone-based Health Information System, *Health Policy and Technology*, 1(2), pp.69-76. doi: 10.1016/j.hlpt.2012.04.004

Other IS Disciplinary topics:

- Thomas, M., Li, Y., and Lee, A. S. (2022) Generalizing the Information Systems Artifact, *Information Systems Research*, doi:10.1287/isre.2022.1106
- Kepes, S., and Thomas, M. (2018) Assessing the Robustness of Meta-analytic Results in Information Systems: Publication Bias and Outliers, *European Journal of Information Systems*, 27(1), pp.90-123. doi: 10.1080/0960085X.2017.1390188
- Lee, A., Thomas, M., and Baskerville, R. (2015) Going Back to Basics in Design Science: From IT Artifact to the IS Artifact, *Information Systems Journal*, 25(1), pp. 5-21. doi: 10.1111/isj.12054

- Martins, R., Thomas, M., and Olivera, T. (2015) Assessing organizational adoption of information systems outsourcing, *Journal of Organizational Computing and Electronic Commerce*, 25(4), pp.360-378. doi:10.1080/10919392.2015.1087702
- Thomas, M., and Dhillon, G. (2012) Interpreting Deep Structures of Information Systems Security, *The Computer Journal*, 55(10), pp. 1148-1156. doi: 10.1093/comjnl/bxr118

Refereed Conference Proceedings:

- Elnagar, S., and Thomas, M. A. (2022) Explaining Cognitive Computing Through the Information Systems Lens, at *The 41st International Conference on Information Systems*, Hydrabad, India.
- Elnagar, S., Yoon, Y., and Thomas, M. A. (2022) An Automatic Ontology Generation Framework with An Organizational Perspective.
- Dori, A., and Thomas, M. A. (2021) A Comparative Analysis of Governance in Cyber Security Strategies of Australia and New Zealand, at *The 28th Pacific Asia Conference on Information Systems*, Dubai, UAE.
- Elnagar, S., and Thomas, M.A. (2020) Federated Deep Learning: A Conceptual Model and Applied Framework for Industry 4.0, at *The 25th Americas Conference on Information Systems*, Salt Lake City, Utah, USA.
- Li, Y., and Thomas, M. (2019) Adopting a Theory of Change Approach for ICT4D Project Impact Assessment - The Case of the CMES Project, at *The 16th International Conference on Social Implications of Computers in Developing Countries, IFIP Working Group 9.4*, Dar es Salaam, Tanzania.
- Onwujekwe, G., Thomas, M., and Osei-Bryson, K.M. (2019) Using Robust Data Governance To Mitigate *The Impact of Cybercrime, 3rd International Conference on Information Systems and Data Mining*, Houston, Texas.
- Thomas, M., Abraham, D., and Liu, D. (2018) Federated Machine Learning for Translational Research *The 24th Americas Conference on Information Systems*, New Orleans, Louisiana.
- Elnagar, S., and Thomas, M. (2018) A Cognitive Framework for Detecting Phishing Websites, at *The 2nd International Conference on Applied Cognitive Computing* 2018, Las Vegas, Nevada.
- Elnagar, S., Weistroffer, H., and Thomas. M. (2018) Agile Requirement Engineering Maturity Framework for Industry 4.0 at *The 15th European, Mediterranean and Middle Eastern Conference on Information Systems*, Limassol, Cyprus.
- Wood, V., and Thomas, M. (2018) Feed the Body, Feed the Mind: Combating the Grip of Food Deserts on Young Students Using the Theory of "Happiness" *The 37th Annual Conference of the Association for Marketing and Healthcare Research*, Colorado.
- Thomas, M., and Li. Y. (2017) On The Reuse Potential Of IS Artifact Through Design Thinking, at *The Workshop on Information Technologies and Systems (WITS)* 2017, Seoul, South Korea.
- Liu D., Li, Y. and Thomas, M. (2017) A Roadmap for Natural Language Processing Research in Information Systems, at *The 50th Hawaii International Conference on System Sciences*, Hawaii (nominated for best paper award).

- Li, Y., Thomas, M., Rana, S., and Stoner, D. (2017) Continuing Medical Education on a Stick: Nepal as a Testbed, at *The 15th International Conference on Social Implications of Computers in Developing Countries, IFIP Working Group 9.4*, Yogyakarta, Indonesia.

- Wood, V., Thomas, M., and Tenney, G. (2017) Give People Fish and Feed Them For A Day, Teach People To Fish and Feed Them For a Lifetime: Applying The Maxim to Food Deserts, *The 36th Annual Conference of the Association for Marketing and Healthcare Research*, Colorado.

- Wood, V., and Thomas, M. (2016) Food Deserts: A Challenge to Health in America, *The 35th Annual Conference of the Association for Marketing and Healthcare Research*, Colorado.

- Thomas, M., and Li, Y. (2015) A Citizen-Centric Framework for ICTE Capacity Development in Haiti, *The 13th International Conference on Social Implications of Computers in Developing Countries, IFIP Working Group 9.4*, Negombo, Sri Lanka.

- Narayan, P., and Thomas, M. (2015) Developing an ICT Based Health Intervention for Female Sex Workers - An Action Research and Participatory Design Approach, *The 13th International Conference on Social Implications of Computers in Developing Countries, IFIP Working Group 9.4*, Sri Lanka.

- Narayan, P., and Thomas, M. (2015) Participation, Social Change and the Technology Diffusion - The Scope of Mobile Phone Based Health Intervention Among Female Sex Workers in Kerala, *Public Health in India: Challenges for the 21st Century, UGC - SAP - National Conference*, Trivandrum, India.

- Li, Y., and Thomas, M. (2014) A Multiple Criteria Decision Analysis (MCDA) Software Selection Framework, at *The 47th Hawaii International Conference on System Sciences*, Hawaii.

- Lee, A. S., Thomas, M. and Baskerville, R. (2013) Going Back to Basics in Design: From the IT Artifact to the IS Artifact, at *The 19th Americas Conference on Information Systems*, Chicago, Illinios.

- Thomas, M., Narayan, P., Li, Y., and Osei-Bryson, K. (2013) Using Association Rules (AR) to Interpret the Health Behavior of Women Living in Marginalized Communities, *The 12th International Conference on Social Implications of Computers in Developing Countries, IFIP Working Group 9.4*, Jamaica.

- Martins, R., Olivera, T., and Thomas, M. (2013) Comparing Information Systems Outsourcing between Human Resource and Finance, *The 8th Iberian Conference on Information Systems and Technologies (CISTI) IEEE*, Lisbon, Portugal.

- Thomas, M., Narayan, P., and Christian, C. (2012) A Mobile Phone-based ICT Solution for Reporting and Tracking Unreported Reproductive Health Problems in the Outlier Communities of Kerala, India, *The 20th European Conference on Information Systems*, Barcelona, Spain.

- Thomas, M., and Narayan, P. (2012) Mobilizing Participatory Communication to Track Unreported Reproductive Tract Issues Among Women in Outlier Communities of Kerala, India, *SIG Global Development Pre-ICIS Workshop*, Barcelona, Spain.

- Wenger, M. R., Thomas, M., and Babb, J. (2012) A Financial Statement Reporting Ontology for XBRL at *The American Accounting Association IS Section Midyear Meeting*, Scottsdale, Arizona.

- Alalwan, J., and Thomas, M. (2011) A Holistic Framework to Evaluate E-Government Systems at *The 17th Americas Conference on Information Systems*, Detroit, MI.
- Wenger, M. R., Thomas, M., and Babb, J. (2011) An Ontological Approach to XBRL Financial Statement Reporting at *The 17th Americas Conference on Information Systems*, Detroit, MI.
- Alalwan, J., and Thomas, M. (2011) Designing ERM Ontology to Evaluate Records Management System, at *The 44th Hawaii International Conference on System Sciences*, Hawaii.
- Thomas, M., and Redmond, R. (2009) From The Client-Server Architecture To The Information-Service Architecture, at *The 15th Americas Conference on Information Systems*, San Francisco, California.
- Sharma, S., Li, L., and Thomas, M. (2008) Socio-Organizational Aspects of Information Systems Security: A Review, at *The 39th Annual Meeting of the Decision Sciences Institute*, Baltimore, Maryland.
- Thomas, M., and Redmond, R. (2007) Using Ontologies For Interaction Assistance in E-Commerce Settings, Web2007 workshop at *The 28th International Conference on Information Systems workshop on E-Business*, Montreal, Canada.
- Thomas, M., and Weistroffer, R. (2007) The Service Oriented Systems Model: Aligning Information Systems Development With Service Orientation, at *The 15th European Conference on Information Systems*, St. Gallen, Switzerland.
- Thomas, M., and Dhillon, G. (2006) Deep Structures of Information Systems Security, at *The 12th Americas Conference on Information Systems*, Acapulco, Mexico.
- Thomas, M., Andoh-Baidoo, F., and George, S. (2005) EVResponse – Moving Beyond Traditional Emergency Response Notification, at *The 11th Americas Conference on Information Systems*, Omaha, Nebraska. Nominated for AMCIS 2005 best paper.
- Thomas, M., Redmond, R. and Yoon, Y., (2004) An Agent Based Framework for Dynamic Management of Business Process Semantics, at *The 10th Americas Conference on Information Systems*, New York, New York.

Books:
- Thomas, M. A., and Zachariah, A. S. (2020). Data Visualization with Tableau: A Beginner's Guide. Amazon Publications, First Edition (pp. 1-180).

Book Chapters:
- Thomas, M. A., Abraham, D.S., and Liu, D. (2020). An Assessment of Federated Machine Learning for Translational Research. In Interdisciplinary Approaches to Digital Transformation and Innovation. IGI Global Publications, (pp.123-142).
- Thomas, M., and Elnagar, S. (2018). A Semantic Approach to Evaluate Web Content of Government Websites. In *Innovative Perspectives on Public Administration in the Digital Age* (pp. 1-24). IGI Global Publications.
- Li, Y., Thomas, M., and Osei-Bryson, K-M. (2013) Using Association Rules Mining to Facilitate Qualitative Data Analysis in Theory Building. In *Advances in*

Research Methods for Information Systems Research, Eds. Osei-Bryson, K-M., and Ngwenyama, O., Springer Science Publications.

- Alalwan, J., and Thomas, M. (2013) An Evaluation Framework to Assess E-Government Systems. In *Human-Centered System Design for Electronic Governance*, Eds. Saeed, S., and Reddick, C., IGI Global Publications.
- Thomas, M., and Redmond, R. (2011) A Framework for Analyzing User Interaction in Digital Spaces. In *Intelligent, Adaptive and Reasoning Technologies: New Developments and Applications*, Ed. Sugumaran, V., IGI Global Publications.
- Thomas, M., Yoon, R., and Redmond, R. (2008) Extending Loosely Coupled Federated Information Systems Using Agent Technology. In *Distributed Intelligence, Agent Technology, and Collaborative Applications*. Ed. Sugumaran, V., IGI Global Publications.
- Thomas, M. (2007) Network Security. In T*he Principles of Information Systems Security: Text and Cases*. Eds. Dhillon, G., John Wiley Publications, New York.

Research Presentations at Universities and Professional Meetings:
- Dori, A., and Thomas. M., A Comparative Study of Governance in Cyber Security Strategies of Australia and New Zealand, Australian Cyber Conference, Melbourne, Australia, November 2021.
- Thomas, M., Invited Session Speaker, The NetHope Global Summit, 2020.
- Thomas, M. (2019) Continuing Medical Education on Stick - A Techies Without Borders Project, Sydney Development Circle, Sydney, Australia.
- Thomas, M. (2018) Generalizing the Information Systems (IS) Artifact, University of New South Wales, Australia.
- Thomas, M. (2017) High-tech Solutions for Low-tech Settings, at the Virginia Research Seminar Series in Information Systems, Virginia Commonwealth University, Richmond, Virginia.
- Thomas, M. (2017) A Roadmap for Natural Language Processing Research in Information Systems, University of Victoria, New Zealand.
- Li Y., and Thomas, M. (March 2014) A Multiple Criteria Decision Analysis (MCDA) Software Evaluation Framework, at The Dean's Seminar Series, School of Business, Virginia Commonwealth University, Richmond, Virginia.
- Thomas, M. (March 2013) Using Data Mining to Interpret Health Behavior in Marginalized Communities: A Cross-Disciplinary Research, at The Dean's Seminar Series, School of Business, Virginia Commonwealth University, Richmond, Virginia.
- Li, Y., and Thomas, M. (Feb 2013) An Ontology for User-centric Data Mining Model Management, at The Information Systems Seminar Series, Dept. of Information Systems, Virginia Commonwealth University, Richmond, Virginia.
- Thomas, M. (Nov 2011) An Ontology Centric Architecture for Mediating Interactions in Semantic E-Commerce Environments, at The Doctoral Seminar Series, Dept. of Computer Science, Virginia Commonwealth University, Richmond, Virginia.

- Thomas, M. (Jan 2009) Secrets of Semantics, at The Pediatric Medicine Research Presentations, Dept. of Pediatric Medicine, University of Utah, Salt Lake City, Utah.
- Thomas, M. (March 2008) A Semantic Approach for Active Guidance in E-Commerce Systems, at The Southern Association for Information Systems Doctoral Consortium, Richmond, Virginia.
- Thomas, M., and Weistroffer, R. (2007) Aligning Information Systems Development With Service Oriented Architecture, The 6th SIGSAND Symposium on Research in Systems Analysis and Design, Tulsa, Oklahoma.
- Thomas, M. (April 2005) Network Security Principles, Information Security Assurance Seminar, Virginia Commonwealth University.
- Thomas, M. (April 2005) Information Security for Active Directory, Guest Lecture, Information Security Assurance Seminar, Virginia Commonwealth University.

Papers Under Review At Peer Reviewed Journals:
- Al Nagar, S., Thomas, M., and Osei-Bryson, K. M., Cognitive Computing: An Architecture and State of Art. (under review at *Expert Systems with Applications*).
- Thomas, M., Sandhu, R., and Oliveira, T. Investigating the Effect of Media Synchrony in Professional Use of Video Conferencing Apps. (under review at the *Internet Research*).
- Chen, X., Thomas, M., Sandhu. R., and Oliveira, T. The Effects of Immersive Technology in Virtual Reality and Metaverse (under review at *Information and Management*).
- Dori, A., Hardy, C., Gozman, D., and Thomas, M. In the Name of Security: Technologies and Terminology Challenges (under review at *European Journal of Information Systems*).

Poster Presentations:
- Zait, R., and Thomas, M. (2017) Assistive Technologies for Continuing Medical Education in Nepal, Undergraduate Research Opportunity Program (UROP) Series, Virginia Commonwealth University, Richmond, Virginia.
- Janjua, N., and Thomas, M. (2016) Developing Information and Communication Technologies for Education in Haiti, Undergraduate Research Opportunity Program (UROP) Series, Virginia Commonwealth University, Richmond, Virginia.
- Li, Y., Thomas, M., Sarbatha, R., and Yu, H. (2016) Continuing Medical Education on Stick for Nepal, Research Presentation Series, Claremont Graduate University, California.
- Gray, S., and Thomas, M. (2015) Addressing the challenges of computer literacy among young Haitian adults, Undergraduate Research Opportunity Program (UROP) Series, Virginia Commonwealth University, Richmond, Virginia.
- Williams, D., Thomas, M., and Li., Y. (2014) An Ontological approach for User-centric Data Mining Model Management, Undergraduate Research Opportunity Program (UROP) Series, Virginia Commonwealth University, Richmond, Virginia.
- Martins, R., Oliveira, T., and Thomas, M. (2013) Understanding Information Systems Outsourcing and SaaS Adoption, at the IEEE Explore 13th Conferência

da Associação Portuguesa de Sistemas de Informação, Universidade de Évora, Évora, Portugal.

Research In Progress

- Dalal, M., Osei-Byrson, K. M., and Thomas, M., Health Information Governance: An Integrated Concept Map.
- Thomas, M., Li, Y., and Sistenich, V. The Risky Nature of Moral Actions in ICT4D: Issues of Information Ethics in Knowledge Transfer and Translation.
- Sandhu, R.,Osei-Bryson, K. M., and Thomas, M. A Blockchain-based Collaborative Health Information Exchange.
- Sandhu, R., Oliveira, T., and Thomas, M., Impact of Environment Awareness in Consumer's Smart Home Decisions (in draft*).*
- Lee, A.S., Thomas, M., and Li., Y. Applying Donald A. Schön's Framework Towards an Understanding of How Information Systems Professionals Think in Action (in draft).
- Thomas, M., Liu, D., and Li, Y., Natural Language Processing enhanced Literature Review (in draft).
- Thomas, M., Arikenbi, T., Boell, S., and Li, Y. Reevaluating the Impact of ICT4D Research and Its Alignment with UN SDGs (in draft).
- Thomas, M., Li., Y., Sistenich, V., and Hovorka, D. Information Ethics in Knowledge Sharing, Transfer, and Translation (in draft).

Grants

Funded research:

- 2022   Thomas. M., Improving Continuing Medical Education in Resource Constrained Countries Using Innovative Low-Cost Technologies ($149,500).
- 2019   Thomas. M., Personalized Machine Learning for Lifestyle Management of Diabetes Patients, The University of Sydney Accelerator Program ($5,000).
- 2019   Thomas. M., Elnagar, S, Morris, C., and Osei-Bryson, K.M., The Kornblau Institute (TKI) Scholars Program Funding for Research in Real Estate ($12,500).
- 2018   Thomas. M., and Morris, C., A Pluralistic Approach for Knowledge Discovery in Real Estate, VCU Undergraduate Research and Creative Scholarship ($2,000).
- 2017   Thomas, M., and Li, Y., Social Sensing of User Generated Content Using Natural Language Processing and an Azure-Based Data Pipeline. Microsoft Azure Research Award ($20,000).
- 2017   Li, Y., and Thomas, M., Assistive Technologies for Continuing Medical Education (CME) Capacity Building in Low Resource Countries, Microsoft Azure Research Award. ($10,000).

- 2017   Thomas, M., Enhancing Access to Continuing Medical Education in Nepal, Dr. Allen Lee Research Scholar Grant, VCU School of Business. ($6000).
- 2016   Thomas. M., Foreman, J., Li, Y., and Liu, D., Assessing Consumer Sentiment Towards Medical Marijuana in Social Media using Natural Language Processing, Microsoft Azure Research Grant ($20,000).
- 2016   Thomas. M., and Zait, R., Assistive Technologies for Continuing Medical Education in Nepal, VCU Undergraduate Research and Creative Scholarship ($2,000).
- 2016   Li, Y., and Thomas, M., Continuing Medical Education (CME) Capacity Building for Nepal, Microsoft Azure Research Award. ($20,000).
- 2016   Li, Y., and Thomas. M., Capacity Building for Continuing Medical Education in Nepal, Fletcher Jones Foundation Faculty Research Fund at Claremont Graduate University. ($8,000).
- 2016   Thomas, M., Developing Information and Communication Technologies for Education (ICTE) in Haiti, VCU Office of the Provost, Division of Community Engagement. ($1000).
- 2015   Thomas, M., Li, Y., and Osei-Bryson., Web-based MCDA software selection, EPIC IS Mini-grant, Dept. of Information Systems, VCU School of Business. ($3,500).
- 2015   Thomas, M., and Janjua, N., Developing Information and Communication Technologies for Education in Haiti, VCU Undergraduate Research and Creative Scholarship ($1,500).
- 2014   Berdish, D., Wood, V. and Thomas, M., Building Sustainable Communities in RVA: Green Ride RVA, The Ford Blue Oval Scholars College Community Challenge ($25,000).
- 2014   Thomas, M., and Bell, C., Information and Communication Technologies for HIV research in Botswana, VCU Undergraduate Research and Creative Scholarship ($2,000).
- 2014   Thomas, M., and Gray, S., Assessing the challenges of Computer Literacy among Young Haitian Adults, VCU Undergraduate Research and Creative Scholarship ($2,000).
- 2014   Thomas, M., and Narayan, P., An exploratory study on the reproductive health and reproductive health behavior of refugee women living in India, Privately funded seed grant from Fichtner Consulting Engineers Pvt Ltd. ($2000).
- 2013   Thomas, M., and Wood, V., Building Sustainable Transportation in RVA for 2015 UCI Road World Cycling Championship, The Ford Blue Oval Scholars College Community Challenge ($25,000).
- 2013   Thomas, M., and Li, Y., A Multicriteria Decision Analysis Software Selection Framework for Real Estate, The KornBlau Institute Scholars Program ($500).

- 2013   Thomas, M., and Williams, D., An Ontological Approach for User-Centric Data Mining Model Management, VCU Undergraduate Research and Creative Scholarship ($2000).

Submitted Grants, not Funded:
- 2021   Grant application with NOVA Information Management School (NOVA IMS) Universidade Nova de Lisboa, Lisbon, Portugal, Chat2Quit: uma nova abordagem para motivar para a cessação tabágica, Fundação para a Ciência e a Technologia, Ministério Da Educação e Ciência, Portugal (EU€250,000).
- 2016   Wood, V., Thomas, M., and Berdish, D., Building Sustainable Communities in RVA: Green Ride RVA, The Ford Blue Oval Scholars College Community Challenge ($25,000).
- 2014   Dey A., Myer, E., Fine, M., More, T., Thomas, M., and Kenyon, S., Affordable Mobile Assist Internet Device for Waterman Aquaculturists Operating in Coastal Estuaries and Bay Geography, USDA-NIFA-SBIR-004553: United States Department of Agriculture Small Business Innovation Research Program - Phase I ($100,000).
- 2013   Kwon, C., Park., Levy, J., McLay, L., Zhuang, Upadhyaya, S., Rao, H.R., Synder, L., Pham, Thomas, M., and Dhillon, G., Senior Investigator for the National Science Foundation (NSF) grant proposal, Enhancing National Aviation Cyber-Security: Quantifying the Economic Impacts of Cyber-Attacks with a Game Theoretic National Interstate Economic Model on Secure and Trustworthy Cyberspace (SaTC).
- 2012   Dhillon, G., Thomas, M., Levy, J., and Pelfrey, W., A Deep Structure Multicriteria Analysis (DSMA) of Information Systems Security, submitted for the VCU Presidential Research Incentive Program.
- 2010   Thomas, M., and Dhillon, G., Mitigating Norm-Rule conflicts in Organizational Information Security, submitted for VCU School of Business Summer Research Grant.

Scholarly Service

Editorial Board Membership and Program Committees
- Associate Editor, Decision Support Systems (2022 - present).
- Associate Editor, Journal of the Association of Information Systems, (2022 - present).
- Associate Editor, IT and People, (2022 - present).
- Associate Editor, Journal of Business Analytics, Editorial Board Member (2018 - current)

- Associate Editor, Journal of Information Technology for Development (ITD), (2019 - current).
- Associate Editor, Journal of Computer Information Systems (JCIS) (2012 - present).
- Vice President (Research), Special Interest Group for Global Development (SIG GlobDev), Association of Information Systems (2019 – 2022).

Invited Reviewer for Journals
- Australian Journal of Information Systems
- Communications of the ACM (CACM)
- Computers & Security
- Decision Support Systems (DSS)
- Electronic Commerce Research and Applications
- eServices Journal
- European Journal of Information Systems (EJIS)
- Future Generation Computer Systems (FGCS)
- Industrial Management & Data Systems
- Information & Management (I&M)
- INFORMS Journal of Computing (JoC)
- International Journal of Information Management (IJIM)
- International Journal of Intelligent Information Technologies
- International Journal of Public Administration in the Digital Age
- Information Systems Frontiers (ISF)
- Information Systems Journal (ISJ)
- Information Technology & People
- Information Technology for Development (ITD)
- Journal of the Association of Information Systems (JAIS)
- Journal of Information System Security
- Journal of Computer Information Systems (JCIS)
- Journal of Management Information Systems (JMIS)
- Telematics & Informatics

Invited Reviewer for Conference Proceedings and Grant Submissions
- Swiss National Foundation
- American Conference on Information Systems (AMCIS)
- Design Science Research In Information Systems and Technology (DESRIST)
- European Conference on Information Systems (ECIS)
- Hawaii International Conference on System Sciences (HICSS)
- International Conference on Information Resources Management (ICIRM)
- International Conference on Information Systems (ICIS)

Invited Panels:

- Panelist on the Capstone Project with Industry Partnership, The University of Sydney Business School, June, 2022.
- Panelist at the 37th Annual Scientific meeting of the Australian College for Emergency Medicine, Hobart, Tasmania, Australia (2019).
- Accelerator Workshop Panelist, The University of Sydney Business School, Oct 2019.
- Successfully Navigating the Transition from Graduate Student to Faculty, Panelist, VCU School of Business (2018).

Conference Programs:
- Americas Conference on Information Systems (AMCIS) 2019 - Mini-track chair
- Bright Internet Global Summit, Program Committee member (2018 - present)
- Design Science Research in Information Systems and Technology (DESRIST) Track Co-Chair, India (2018).
- Workshop on Information Technologies and Systems (WITS), Program Committee member, South Korea (2017).
- Vice President (Communications), Special Interest Group for Global Development (SIG GlobDev), Association of Information Systems (2017 − 2019)
- International Journal of Electronic Finance (IJEF) Special Issue on The Issues and Challenges of E-Banking Application and Development in Sub-Sahara African Countries, Editorial Review Board (2012-2013).
- Journal of Information Technology for Development (ITD) Special Issue on Organizational ICT Issues in Developing Economies Editorial Review Board (2012-2013).

Teaching

The University of Sydney, Australia:
- INFS6024: Managing Data at Scale
  Level: Graduate
  Span: 2021 - Present
  Focus: The course provides an understanding of the importance of data strategies, data governance and data quality, challenges associated with data protection, privacy and security, data management practices, and modern platforms and architecture to streamline data operations within an organisation.
- INFS6023: Data Visualization
  Level: Graduate
  Span: 2019 - Present
  Focus: Equip students with necessary knowledge in data visualization skills, story-telling, and scenario development, understand leading industry practices.
- BUSN6002: Data Science in Business
  Level: Graduate
  Span: 2019 - Present

Focus: Provide overview of data science principles and relevant use of big data in business planning, decision-making and operations based on a cross-disciplinary approach covering disciplines of Business Information Systems and Business Analytics, applied in the context of Marketing problems.

Virginia Commonwealth University, USA:
- BUSN700: Principles of Scientific Enquiry in Business
  Level: Doctoral Seminar
  Span: 1 Semester (Fall 2018)
  Focus: Required course in the research core for Information System students in the PhD in Business program. The course provides students an understanding of the basic principles of science pertinent not only to business-school research, but also to scholarly knowledge in general. It helps students develop an idea of "science" not as a body of knowledge, but as forms of logic or reasoning in positivist research, interpretive research, action research, and design research.
  Evaluation: Numeric score not available.
- INFO790: Topics in Data Science
  Level: Doctoral Seminar
  Span: 1 Semester (Fall 2017)
  Focus: Introduce influential literature and seminal scholarship in data science discipline, explore how companies optimally deploy and exploit data science for competitive advantage, how related methods, tools, and techniques may be utilized for supporting business operations and creating solutions that benefit society.
  Evaluation: Numeric score not available.
- INFO790: Semantic Systems
  Level: Doctoral Seminar
  Span: 3 Semesters (Spring of 2015, 2013, 2010)
  Focus: Understand advanced concepts and leading research in semantics systems, examine and explore seminal literature, pertinent methodologies and theoretical frameworks, and familiarize students with ontology modeling tools and reasoning techniques. Provide a foundation in the design and development of independent research initiative that corresponds to individual research area and interest.
  Evaluation: Numeric score not available.
- INFO691: Big Data Analytics
  Level: Graduate
  Span: 1 Semester (Spring 2018)
  Focus: Topics covering big data architecture, Hadoop ecosystem, and related technologies.
  Evaluation: Very Good (numeric score not available).
- INFO691: Advanced Data Analytics
  Level: Graduate
  Span: 2 Semesters (Spring 2015, Fall 2015)
  Focus: Provide in-depth understanding of important concepts, models and techniques related to data analytics/knowledge discovery processes. Use team-based learning experience to conduct real-world data analytics projects using data

from business sponsors.
Evaluation: Very Good (Numeric score not available).

- INFO491: Python for Data Science
  Level: Undergraduate
  Span: 1 Semester (Fall 2018)
  Focus: Provide a fundamental understanding of using Python for data science. It explores the use of Python for data understanding, data preparation, exploratory data analysis, data manipulation, machine learning, visualization, and reporting.
  Evaluation: Very Good (numeric score not available).

- INFO491: Fundamentals of Big Data Analytics
  Level: Undergraduate
  Span: 1 Semester (Spring 2016)
  Focus: Introduction to big data architecture, software and analysis. The course provides students introduction to the Hadoop ecosystem and related technologies.
  Evaluation: 4.63/5.0.

- INFO451: Advanced Technologies for E-Business
  Level: Undergraduate
  Span: 12 Semesters
  Focus: B2B and B2C web application development using Microsoft C#, ASP.Net, Java (prior to 2010), XML APIs, web services and web server controls in a multi-tiered environment.
  Evaluation: 4.52/5.0 over the period of last 6 semesters.

- INFO472: Infrastructure Services
  Level: Undergraduate
  Span: 12 Semesters
  Focus: Local Area Network (LAN) technology with emphasis on underlying protocols and focusing on the importance of security in network administration with hands-on Linux and Windows Active Directory (ADS) administration.
  Evaluation: 4.57/5.0 over the period of last 6 semesters.

Other Courses Taught

- INFO690: Emerging Technologies and Tools for the web
  Level: Graduate
  Span: 2 Semesters
  Focus: Review of emerging technologies for IT Managers, covering topics on Rich Internet Applications, Virtualization, SAAS, Cloud Computing, Enterprise Infrastructure Services and Semantic Web.
  Evaluation: Very Good (numeric scale not available).

- ISTM674: Network Security and Administration
  Level: Executive Masters in Information Systems
  Span: 2 Semesters
  Focus: Review of network security topics for IT Managers establishing enterprise wide information security, assurance and availability.
  Evaluation: Very Good (numeric scale not available).

- INFO491: Service Learning - Topics in IS - 9 semesters

- INFO450: Advanced C++ Programming (Undergraduate) - 4 Semesters

- INFO358: Introduction To C++ Programming (Undergraduate) - 2 Semesters
- INFO690: E-Commerce II Application Development - 1 Semester

PhD Committees Served

- Dinushika Pujitha Gunavardena
  Dissertation: Data Management in the Age of Digital Transformation: New
  Trajectories and Directions
  Affiliation: The University of Sydney Business School, Sydney, Australia
  Role: Lead Supervisor
  Anticipated Graduation: December 2025.
- Asaf Dori
  Dissertation: Cybersecurity Governance
  Affiliation: The University of Sydney Business School, Sydney, Australia
  Role: Secondary Supervisor
  Anticipated Graduation: September 2024.
- Xiaoming Chen
  Dissertation: A Study on How Immersive Video Storytelling Affects Consumer
  Intention with Dual-Channel Transportations
  Affiliation: The University of Sydney Business School, Sydney, Australia
  Role: Lead Supervisor
  Anticipated Graduation: July 2023.
- Yangting Li
  Dissertation: Exploiting Resource Fluidity for Digital Transformation – A
  Revelatory Case Study
  Affiliation: The University of Sydney Business School, Sydney, Australia
  Role: Secondary Supervisor
  Anticipated Graduation: December 2023.
- Tayo Arikenbi
  Dissertation: UN Sustainable Goals and the Impact of ICT4D Research
  Affiliation: Center for Information Systems and Technology, Claremont Graduate
  University, Los Angeles, California, USA.
  Anticipated Graduation: Fall 2023.
- Ruizhi Yu
  Dissertation: PICT-DPA: A Quality-Compliance Data Processing Architecture to
  Improve the Performance of Integrated Emergency Care Clinical Decision
  Support System
  Affiliation: Center for Information Systems and Technology, Claremont Graduate
  University, Los Angeles, California, USA.
  Anticipated Graduation: Spring 2023.
- Yousif Alhashemi
  Dissertation: Towards Developing Real-time Alert for Social Media Policy
  Compliance
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: July 2022.

- Mauli Dalal
  Dissertation: Health Information Governance: An Exploration on Information Management, Compliance & Consent
  Role: Dissertation Co-Chair.
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: May 2022.
- Ramandeep Sandhu
  Dissertation: Design and Exploration of New Models for Security and Privacy Sensitive Collaboration Systems
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: March 2022.
- Samaa ElNagar
  Dissertation: Inquiries in Intelligent Information Systems: New Trajectories and Paradigms
  Role: Dissertation Co-Chair.
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: Fall 2021.
- Chris Merritt
  Dissertation: From Static Analysis to Application Penetration Testing: A Framework for Automatically Generating Penetration Testing Scripts from Static Analysis Security Testing (SAST)
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: Aug 2021.
- Javad Abad
  Dissertation: A Novel Framework for the Social Internet of Things: Leveraging the Friendships and the Services Exchanged Between Smart Devices
  Role: Dissertation Chair
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: July 2019.
- Dapeng Liu
  Dissertation: Towards Developing a Real-Time Goal-Driven Data Integration System for Counter-terrorism Analytics
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: June 2019.
- Dean Jones
  Dissertation: Harnessing the Collective Intelligence in Big Natural Language Data
  Role: Thesis External Examiner.
  Affiliation: The University of West Indies.
  Graduated: Spring 2019.
- Lawrence Bunnell
  Dissertation: FinPathlight: A Framework for an Ontology-based Hybrid Recommender System to Increase Financial Capability.
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated:Spring 2019.
- Kane Smith
  Dissertation: A Multi-Objective Framework for Information Security Public Policy:

The Case of Health Informatics
Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
Graduated: April 2018.

- Priya Pattath
Dissertation: Exploring the Association between Internet-based Health Information Seeking Behavior of Computer Professionals and Work-Related Musculoskeletal Disorders: Implications for Self-Directed Online Ergonomic Education.
Affiliation: Department of Education, Virginia Commonwealth University.
Graduated: Summer 2017.

- Ricardo José Dos Santos Martins
Dissertation: Assessing Software as a Service Diffusion: From Adoption to its Continuance Intention.
Role: Dissertation Co-Chair.
Affiliation: ISEGI, Universidade Nova de Lisboa, Lisbon, Portugal.
Graduated: Spring 2017.

- Long Flory
Dissertation: A Web Personalization Artifact for Utility-Sensitive Review Analysis.
Role: Committee Member.
Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
Graduated: Spring 2015.

- Yan Li
Dissertation: New Artifacts for Knowledge Discovery via Data Analytics (KDDA) Process.
Graduated: Spring 2015.

- Yurita Yakimin Abdul Talib
Dissertation: Intrinsic Motivation and Information Security Policies Compliance.
Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
Graduated: Spring 2015.

- David Coss
Dissertation: Cloud Privacy Audit Framework: A Value-Based Design.
Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
Graduated: Spring 2013.

- Jaffar Alalwan
Dissertation: The Strategic Association Between Enterprise Content Management And Decision Support: Determining the Strategic Capabilities of ECM and how they can be Utilized.
Role: Dissertation Co-Chair.
Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
Graduated: Spring 2012.

- Mohammed Al-Saigh
Dissertation: Designing a Comprehensive Framework for E-Government Implementation Success with a Special View of the Case of Saudi Arabia.
Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
Graduated: Spring 2012.

- Steven P Larson
  Dissertation: Digital privacy ignorance or apathy: Antecedents to not securely deleting data.
  Affiliation: Dept. of Information Systems, Virginia Commonwealth University.
  Graduated: Summer 2011.

Masters Committees Served

- Nguyen Tu Nhy Pham
  Thesis: Employee Wellbeing Program: Designing the Digital Nudge
  Role: Lead Supervisor
  Affiliation: The University of Sydney Business School, Sydney, Australia
  Anticipated Graduation: July 2023.
- João Miguel de Vasconcelos Gomes
  Thesis: Assessing Users's Acceptance of Video Conference Apps During the COVID-19 Pandemic Using Privacy Calculus Theory
  Role: Thesis Committee Member.
  Affiliation: Information Management School, Universidade Nova de Lisboa, Lisbon, Portugal.
  Graduated: Summer 2021.
- Ioana-Alexandra Bara
  Thesis: Discovering Spam Campaigns on Twitter
  Role: Thesis Committee Member.
  Affiliation: Department of Computer Science, Virginia Commonwealth University
  Graduated: Summer 2014.

Academic Service

The University of Sydney, Australia:
- The University of Sydney Business Intelligence Steering Committee (member, 2019).
- The University of Sydney Research Support Model Project Steering Committee (member, 2019 - present).
- The University of Sydney, Business Information Systems Engaged Research Representative (2019 - present).
- Academic Ambassadors for Diversity, Masterclass Presenter (2020 - current).

Virginia Commonwealth University, USA:
- University Undergraduate Research Advisory Council (URAC) member (2015 - 2018).
- VCU School of Business, Summer Research Fellow Search Committee (2017).

- Executive Masters in IS (EMSIS) module coordinator managing three course contents, scheduling Leadership classes and Guest Speaker sessions for the IS Enterprise & Global Challenges module (2009 - 2017).
- Content Advisor for the Emerging Technology Course (ISTM 674), and theme advisor for Data Communication and IT Infrastructure sessions of the Executive Masters in IS (EMSIS) program (2011 - 2017).
- VCU Department of Information Systems faculty search committee member (2017).
- VCU School of Business Diversity Planning group member (2011 - 2013).
- VCU Department of Information Systems collateral faculty search committee Chair (2011, 2013).
- Content Advisor for the Digital Economy Course (ISTM 678) of the Executive Masters in Information Systems program (2009, 2010).
- PhD Curriculum Committee member, VCU Department of Information Systems (2011 - current).
- Undergraduate Curriculum Committee member, VCU Department of Information Systems (2002, 2003, 2009).
- Technology Resource Committee member, VCU School of Business (Chair 2004; member 2001-2014).
- Microsoft Imagine Cup Faculty Advisor for the teams in 2004 (Regional Runner-up), 2005, 2010, 2012.
- Association of Information Technology Professionals (AITP) student chapter Faculty Advisor (2010 - 2013).

Professional Experience

- Associate Professor, Discipline of Business Information Systems, The University of Sydney Business School   Feb, 2019 - Present
    - Responsibilities:
      Research and teaching in the area of knowledge management, data science, and emerging technologies. Service engagements in the Post Graduate Degree program.
- Associate Professor, Dept. of Information Systems, VCU School of Business 2016 - Dec, 2018
    - Responsibilities:
      Research, teaching, and service engagements expected of a tenured faculty at a university classified as "R1: Doctoral University - Highest Research Activity" by the Carnegie Classification of Institutions of Higher Education. Participation in curricular development, student advising, executive program management, and community engagement, besides the primary role of pursuing a strong research agenda.

- Assistant Professor, Dept. of Information Systems, VCU School of Business
  2011 - 2016
  - Responsibilities:
    Research, teaching, and service engagements expected of a tenure-track faculty at a university classified as "R1: Doctoral University - Highest Research Activity" by the Carnegie Classification of Institutions of Higher Education.
    Participation in curricular development, student advising, executive program management, and community engagement, besides the primary role of pursuing a strong research agenda.
- Collateral Faculty, Dept. of Information Systems, VCU School of Business
  2001 - 2011
- Director of Technology, , Dept. of Information Systems, VCU School of Business
  2001 - Present
  - Responsibilities:
    Requirement planning, infrastructure development and management of a multi-OS computing environment supporting enterprise business applications and various types of database systems. Consulting for Information Systems Research Institute (ISRI) on e-commerce and web development initiatives using Java and Microsoft .NET Framework. Evaluation and selection of new technologies, mentoring and coaching of IT staff, instruction of technology courses and seminars.
  - Significant Projects:
    Participated in developing the pilot Risk Mitigation and Remediation plan for the VCU Information Security Department for establishing compliance and risk remediation standards within all units of the university.
    Senior IT systems consultant for evaluating vendor proposals for a $30 million Request For Proposal (RFP) for the Commonwealth of Virginia. Provided a report of findings and recommendations to the Executive Management Committee of a four state Health Department Consortium.
    Technical consultant for the Portal Development project for Social Security Agency providing lead IT consultation for developing a web based decision support tool for people with disabilities, advocates and state benefit counselors. The portal used complex rule dependencies based on federal benefit programs and state level work incentive programs.
    RFP development for Virginia State Police to implement a facial recognition and feature extraction software for data acquisition and target matching.
    Implementation and customization of SAP R/3 for VCU Information Systems in collaboration with Philip Morris, USA and Dominion Power, VA.
    Java mobile application development for conducting surveys in the food desert areas of Richmond, VA.
    Programming instructor to the web integration team at Fort Lee Military Base, Virginia, USA.
- IT Manager and Instructor, Information Systems Dept., VCU School of Business
  1999 - 2001

- Responsibilities:
  Oversee management of back-office operations including Windows 2000 servers, ADS, and Linux administration, Oracle9i server administration, database management, and performance tuning for Designer Application development using WebDb and Enterprise Management Tools, and SAP and JD Edwards Environment administration and maintenance. Instructor for Advanced Java programming, Visual C++, and Win32 application development.
- Network Administrator, Dept. of Information Systems, VCU School of Business 1997 - 1999
  - Responsibilities:
    Network infrastructure support. Managed Novell NDS trees and Windows NT domains with about 700 users. Oracle database and 9iDesigner repository administrator. Development and maintenance of Information Systems Dept. web site.
- Research Assistant, Dept. of Marketing, VCU School of Business 1996 - 1997
  - Significant Projects:
    Market analysis, expansion strategy and trend prediction for Goodwill Industries, VA. Community Pride Stores, VA. and Richfood Inc., VA. Data modeling with PowerBuilder and Rational Rose for independent projects.
- Project Engineer, Honeywell Systems, Pune, India 1995 - 1996
  - Significant Projects:
    Engineering, Design, Commission of Plant and Building Automation Systems. Major sites included National Petrochemicals Ltd., Iran., Information Technology Park, India., TATA Research Center, India.

Awards and Recognitions

- Fulbright Global Scholar Award, 2022- 2023.
- Visiting Research Fellow, Harris Manchester College, Oxford University, UK (2018).
- Best Paper Award - Agile Requirement Engineering Maturity Framework for Industry 4.0, The 15th European, Mediterranean and Middle Eastern Conference on Information Systems, Limassol, Cyprus (2018).
- Award of Excellence, VCU School of Business, Virginia, USA (2018).
- Citations of Excellence Award, Emerald Group Publishing recognizing highly cited papers in areas of Business Management, Finance, Accounting, Economics, and Marketing (2017).
- Distinguished Scholar Award for Research Excellence, VCU School of Business (2017).
- Best Paper nomination – Data Text, and Web Mining for Business Analytics Track, at the 50th Hawaiian International Conference on Systems Sciences (2017).

- Honorary mention at the VCU President's State of the University address showcasing work done to advance society through discovery, scholarship and innovation (2017).
- Faculty selected and profiled by VCU Division of Community Engagement (DCE) for commitment to community engaged research (2016).
- Research engaging students highlighted in the VCU Annual Report (2016).
- Outstanding VCU Faculty Mentor Award for Contributions to Undergraduate Research at the University (2015).
- Distinguished Teacher Award for Teaching Excellence, VCU School of Business (2015).
- Professional Faculty Excellence Award, VCU School of Business (2011).
- Distinguished Teacher Award for Teaching Excellence, VCU School of Business (2009).
- Distinguished Teacher Award Nomination, VCU School of Business (2004, 2007, and 2013).
- Doctoral level Dean's Scholar Award for Academic excellence (2008).
- Best Paper nomination – Emergency Response Systems Track, AMCIS (2005).

Professional Memberships

- Association of Information Systems (AIS).
- Beta Gamma Sigma Honor Society – Highest Academic Recognition for Business School.
- Special Interest Group on ICT and Global Development (SIG Globdev)
- Professional Association of Diving Instructors (PADI).
- Merit of the Eagle Scout

Professional Development and Certifications

- Business Insights with Google Analytics, Certificate of Completion, Centre for Continuing Education, University of Sydney (2019).
- Data Visualization, Certificate of Completion, Centre for Continuing Education, University of Sydney (2019).
- IBM AS400 certification, Rochester, New York, USA (2006)
- JD Edwards certification, Denver, Colorado, USA (2005)

Community Engagement

International:

- Global: Technology solution for the delivery of Continuing Medical Education (CME) content for medical practitioners. The platform includes a cloud-based application for CME media storage, distribution, and protection, a USB-based CME on a Stick (CMES) application for content dissemination, and Rasberry Pi based solution for localized CME content access in high mountain village hospitals with limited Internet connectivity. The project is ongoing, and has received numerous funding from companies such as Microsoft Corp, Dataplicity, Github, and Amazon.
- Brazil: Implemented a multi-location network infrastructure at the Iracambi Research Center in the Atlantic rainforest for conducting research on rainforest ecosystems, managing natural resources, and developing sustainable communities. The project was sponsored by the United States Farmer-to-Farmer project and funded by the US Agency for International Development (USAID).
- Botswana: Assisted in the development and maintenance of the EDC software for the Botswana Combination Prevention Project (BCPP), an enhanced intervention package for the prevention and reduction of HIV/AIDS epidemic. The solution was implemented in Python language on Django framework. The research was funded by the United States Center for Disease Control and Prevention (CDC), the National Institute of Health (NIH), Botswana Ministry of Health, and the Harvard School of Public Health.
- Haiti: Lead the Information and Communication Technologies for Education (ICT4E) project in Centre Province. Developed a methodological approach to provide technology access and information literacy to young adults, and teachers. Offered training program to approximately 380 Haitians. Currently developing a finger print based solution for immunization record management among primary school children. The project is ongoing.
- Haiti: Feasibility study for the adoption and use of XO laptops (One Laptop Per Child initiative) in the Hinche Centre province of Haiti (completed 2011).
- India: Developed a mHealth cell phone based solution to track reproductive tract infections (RTI) among women living in marginalized communities. The solution allows community health workers and medical officers to identify RTI incidents and deliver primary care. The project has received the backing of the Burmese Women of Delhi (BWD) and the United Nations High Commissioner for Refugees (UN-HCR). The project is ongoing.

United States:
- Co-founder of *Techies Without Borders* (www.techieswithoutborders.us), a 501(c)3 federally approved non-profit charitable organization that aims to bring together like-minded IT professionals, and provide opportunities to use their talent and skill for humanitarian good.
- Original website development of seachange.org, an ecological awareness website for promoting awareness of fragile ecosystems and protecting endangered fish species in the South Pacific. The website is now managed by an independent foundation.
- Original web portal development of forteensonly.net, an awareness website for outreach and education among adolescent teens and young parents. The portal

aims to help disseminate information to prevent teenage pregnancy and sexually transmitted diseases, as well promote planned parenthood and healthy lifestyles. The project is now managed by a non-profit in the Metropolitan Washington D.C. region.

Regional (Richmond, Virginia, USA)
- Leading students to examine challenges of limited access to healthy food options, employment, healthcare, vocational training, and other issues arising from the lack of transportation in "food desert" areas. With the goal of stimulating, developing, and growing entrepreneurial initiatives in the area, the project has developed various solutions to empower the community to change and improve the quality of their lives. Since 2013, the project has engaged over 70 students who have committed more than 25,000 hours of community engagement service. The project is on-going, and has received $50,000 funding from the Ford Motor Company.

Technical Skills

- Big Data Technologies
  Knowledge and experience with Hadoop, Spark, Pig, Hive, Sqoop, Flume, HBase and MapReduce.
  Knowledge of combing big data with analytic techniques (e.g., predictive modeling, statistical programming, machine learning, data mining, data visualization).
  Experience and proficiency in scripting languages for big data (e.g., Java, R, Python, Perl, C++, SQL, Hive-QL, and Pig).
  Strong foundation in databases, data modeling techniques, and ETL implementations. Proficient in querying and analyzing very large scale structured and unstructured data sets.
- Data Analytics
  Proficiency in developing supervised and unsupervised machine learning models, model management approaches such as Cross Industry Standard Process for Data Mining (CRISP-DM), tools such as IBM SAS Enterprise Miner and IBM Intelligent Miner, Simulation methods, and Discrete Event Modeling.
- Programming Languages and platforms
  Microsoft .NET Framework (C#, ASP.NET), Java Technologies, Open Source scripting, and Web servers (IIS and Apache).
  Experience implementing Web Service technologies in Microsoft Azure Cloud
- Knowledge Engineering Tools and Languages
  Protégé 2000 Knowledge Acquisition System, ontology languages (OWL-DL), and ontology manipulation using SPARQL for RDF queries, SWRL logic rules, and SQWRL queries.
  Expert System Shells (JESS), and reasoner engines (e.g., Racer Pro, Pellet).
- Operating Systems
  Active Directory (ADS and DNS) administration, Windows Server platforms, Linux administration, and Microsoft Azure cloud platform management.

- Databases and Query Languages
  Oracle (12g & 11g Administration on Linux, Enterprise Manager, SQL, ETL techniques, PL/SQL.
  Microsoft SQL Server (Administration and data manipulation).
  MongoDB (Administration and data manipulation).

References

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