

Pavankumar Mulgund

Management Science and Systems
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ACADEMIC EXPERIENCE

Clinical Assistant Professor	University at Buffalo School of Management	Aug 2015- Till Date
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EDUCATION

Ph.D.	University at Buffalo Management Science and Systems	Feb 2020
M.S.	University at Buffalo Management Information Systems	June 2014
B.E.	Visveswaraya Technological University Information systems	June 2006

RESEARCH

Journal Articles

Mulgund P, Sharman R, Anand P, Shekhar S, Karadi P Data Quality Issues With Physician-Rating Websites: Systematic Review. J Med Internet Res 2020;22(9):e15916. URL: <https://www.jmir.org/2020/9/e15916>. DOI: 10.2196/15916 PMID: 32986000

Mulgund, P., Sharma, A., Srivastava, A., Agarwal, L., (2020). Blockchain beyond cryptocurrencies. Cutter IT Journal, 32(11).

Agarwal, L., **Mulgund, P.**, Sharman, R. (2020). Customer Experience in Financial Services: New Directives and New Technologies. Cutter IT Journal, 32(10).

Mulgund, P. P. & Marrazzo, S. (2019). Strategic Perspectives on AI Product Development-A qualitative study. Cutter IT Journal, 32(8).

Mulgund, P., Pahwa, P., & Chaudhari, G. (2019). Strengthening IT Governance and Controls Using COBIT: A Systematic Literature Review. *International Journal of Risk and Contingency Management (IJRCM)*, 8(4), 66-90. doi:10.4018/IJRCM.2019100104

UNDER REVIEW

Gaia, J., **Mulgund, P.,** Sharman, R., “*The Impact of Internet Based Therapies on Recovery from Anxiety Disorders*” (Current Status: under review 1st round at *Journal of Medical Internet Research*)

Mulgund, P., Mulgund, B., Sharman, R. “*Implications of California consumer privacy act on healthcare organizations*” – (Current Status: under review 1st round at Health policy and technology).

WORK IN PROGRESS

Mulgund, P., Sharman, R., Sun, Y., Ivanov, A. “*An empirical investigation of moderation effects of practice affiliation and specialty markets on the impact of health IT on medical referrals*” – (Current Status: under copy editing; Targeting ISR).

Mulgund, P., Sharman, R., and Puroo, S., “*Classifying information needs of Sexually Transmitted Diseases (STD) patients – A design science approach*” (Current Status: Draft work in progress; Targeting JAIS)

- Shorter version was presented at the Informs healthcare conference, July-19

Proceedings & Conferences

Mulgund, P., Sharman, R., and Puroo, S., “Classifying information needs of Sexually Transmitted Diseases (STD) patients – A design science approach”, INFORMS Healthcare Conference 2019, Cambridge, Massachusetts, July 27 – 29, 2019

Ndabu, T., **Mulgund, P.,** Sharman, R., and Garg, R., “Design Principles for Healthcare Applications: A patient safety focus”, Presented as a poster at the 14th International Conference on Design Science Research in Information Systems and Technology (DESRIST), Dublin, Ireland, Worcester, Massachusetts, June 4 – June 6, 2019

Vasishta, A. N., Gupta, M., Misra, S. K., **Mulgund, P.,** & Sharman, R. (2018, June). Optimizing Cybersecurity Program-Evidence from Data Breaches in Healthcare. In 13th Annual Symposium on Information Assurance (ASIA '18) (p. 36).

P. Mulgund, M. Gupta, S. Singh, S. Walia, R. Sharman, "Framework to analyze the vulnerabilities in IOT", 12th Annual Symposium on Information Assurance (ASIA' 17), JUNE 7-8, 2017.

Monteiro*, J., **Mulgund, P.,** Sharman, R. (2016). A Framework for Next Generation iCBT Applications for SAD Patients. AMCIS 2016. S. Diego, CA

Mulgund, P., Han, W., Sharman, R., Upadhya, A., Bandi, S. R., Miriyapalli, V., ... & Singh, G. (2014, May). Personalized medication adherence motivating and reminding system (PMAMRS). In International Conference on Design Science Research in Information Systems (pp. 448-452). Springer, Cham.

Han, W., **Mulgund, P.**, Sharman, R., Singh, G., & Singh, R. (2014). Self Health Management Mobile Application for Diabetic Patients and the Impact on Treatment Adherence.

Monteiro, J., Yuan, S., Upadhya, A., **Mulgund, P.**, Malaviya, M., & Sharman, R. (2014, May). Mass Shooting Incident Response Optimization System: Development of Situational Aware Incident Response System. In International Conference on Design Science Research in Information Systems (pp. 428-432). Springer, Cham.

Co-Edited Book

Gupta, M., Sharman, R., Walp, J., & **Mulgund, P.** (Eds.). (2017). "Information Technology Risk Management and Compliance in Modern Organizations". IGI Global.

RESEARCH INTERESTS

Health Information Systems, Health Informatics, Security and Privacy, Data & Information Quality, Design Science Research, Emergency Management.

EXTERNAL FUNDING PROJECT

- 2019 People Inc. (PI, \$55000.0) for service-oriented enterprise and data architecture

SERVICE

- Designed and developed stackable digital certificates leading into a graduate degree
- Serve as the Program Manager/Associate Director for the MS in MIS program
- Manage day to day operations, student recruitment, enrollment and academic advising
- Prepared syllabus for MGS 406 - Big Data Technologies and additional documentation for upcoming UB Bachelor of Science in IT management program
- Served on the Non-Tenure faculty search committee

AWARDS

- Health informatics Track Chair for American Conference on Information Systems (AMCIS,2020)
- Winner of the PHD showcase & poster competition at University at Buffalo, 2019

- Dean's discretionary lump-sum award for excellence in teaching & service, 2019
- Shortlisted for doctoral consortium at Conference on Health IT and Analytics (CHITA)
- UB Excellence in Research, Scholarship and Creativity Certificate of Excellence, 2018
- Dean's discretionary lump-sum award for excellence in teaching & service, 2018
- Runners up award for Best Prototype at Workshop for Information Systems (WITS), 2014

EDITORIAL EXPERIENCE

- Ad-hoc reviewer for Journal of medical internet research (JMIR) and IS conferences - AMCIS, ICIS

PROFESSIONAL CERTIFICATIONS & LICENSES

- IBM certified Design Thinking co-creator
- IBM certified Enterprise Design Thinking practitioner
- Project Management Institute – Agile certified professional (PMI-ACP)
- Certified Scaled Agile Program Consultant (SPC 5.0)
- Certified Safe 4 agilist from Scaled Agile INC
- Certified scrum master from Scrum Alliance (CSM)
- Certified Product owner from Scrum Alliance (CSPO)
- Certified large-scale scrum basics from Less works
- EMC Data Science Associate v2
- Certified Information Systems Auditor (CISA) exam pass
- Management in Health – The World Bank Group

PROFESSIONAL EXPERIENCE

ACTIONET

Baltimore, Maryland, USA

Senior Business Analyst- Product Owner

June 2014 – Aug 2015

- Managed overall internal and client's operational and administrative functions including external agencies to deliver best IT products for our federal clients Center of Medicare and Medicaid Services (CMS), the largest government health insurer in the US
- Leveraged my expertise of software architectures, software lifecycle methodologies and information systems development and participate in all phases of complex functional and technical analysis to provide deliverables such as functional specification documents.
- Drove functional and technical specifications to completion, engage effectively with key stakeholders, identify and set success criteria and have a full understanding of the define/build/ship development cycle

IBM INDIA PVT LTD

Bangalore, India

Senior Systems Analyst

August 2010-July 2013

- Managed end to end software development for Smarter Commerce products of IBM.

OBOPAY MOBILE PVT LTD

Bangalore, India

QA Engineer

July 2006 – August 2010

- Lead automated and manual QA teams that verified mobile payment applications

MINDTREE LTD.

Bangalore, India

Senior Test Engineer

July 2006 – August 2009

- Developed automated test frameworks using cutting edge technologies like Python

TEACHING EXPERIENCE

Over the last 4 years, I have taught the following graduate level courses

- **Database Management Systems (MGS-613)**

This course is designed to provide students with a comprehensive understanding of database management systems (DBMS) and the skills needed to design and implement a relational database. Students will be introduced to data modeling concepts, modeling tools, the process of transforming conceptual models into relational database designs, and finally the steps needed to implement those designs. Emphasis is placed on Entity-Relationship diagramming, data normalization, database administration, and data definition, data manipulation and query development using Structured Query Language (SQL). Specifically, topics like joins, correlated and non-correlated subqueries, aggregations, analytical functions, hierarchical & flash queries, stored procedures and triggers are explored at a considerable depth using a hands-on approach.

Following are some noteworthy accomplishments:

- In fall 2018, I was in the ***top 3 percentile*** of all instructors across the school
- Overall instructor rating of ***4.933 out of 5*** (school average 4.3)

- **Systems analysis and design (MGS-614)**

This course introduces the systems development life cycle (SDLC) emphasizing the recent adaptive approaches to SDLC, such as the unified process life cycle and agile

methods. The course focuses on the disciplines of business modeling, requirements analysis, and logical design and utilizes the Unified Modeling Language (UML) for analysis, modeling, and design of business-oriented information systems. Iterative methods of software development such as Scrum, Kanban and XP are discussed.

Following are some noteworthy accomplishments:

- In Spring 2019, I was in **top 5 percentile** of all instructors across the school
- Overall instructor rating of **4.83 out of 5** (school average 4.3)

- **Experiential IT projects (MGS-618)**

This course is designed to provide our graduate MIS students an opportunity to apply ***the machine learning and data science skills*** acquired as part of their coursework to a realistic problem in a corporate setting. As part of this course, a group of 4 to 5 students will work with executives from local organization to define and articulate a specific problem faced by a local company. Further, leveraging *machine learning and data science techniques*, the student teams are expected to come up with multiple innovative solutions, evaluate alternatives and present a proof of concept solutions to subject matter experts and executive management. They will also implement a minimum viable solution or prototype and present it to the panel. The teams will follow agile methodology and incrementally deliver solution while engaging with the industry partners.

Following are some noteworthy accomplishments:

- This course is touted as a unique example of collaboration between local organizations and academia
- Overall course rating of **4.7 out of 5** (school average 4.3)

- **DATA VISUALIZATION WITH TABLEAU – A SHORT COURSE**

In collaboration with Institute for Computational and Data sciences (ICDS), I offer a two-day data visualization workshop for executives in Buffalo Niagara region. Participants explore the use of Tableau and learn how to use the drag and drop interface, create bar charts, line graphs, heat map, pie charts and make a tableau dashboard/Story. Further, they learn to import data from several sources such as Excel, text, CSV, databases and data mart. They perform simple and advanced sorting, joins, create groups/sets, compute simple calculated field and develop dynamic dashboards. In addition, they blend data from disparate sources, perform complex joins and understand the difference between them. Further, students perform advanced calculations including analytics features such as forecasting and cluster analysis

Following are some noteworthy accomplishments:

- Every participant rated this course *'Exceeds expectation'* or better

TEACHING INTERESTS

- Database Management Systems (UG/G), Data visualization (UG/G), Data Analysis with Python (UG/G), Machine learning with Python (UG/G), System Analysis and Design (UG/G), Digital Product Management (UG/G), IT Project Management (UG/G), Object-oriented programming (UG/G)