Jay S. Patel, BDS, MS, PhD

Assistant Professor of Health Informatics
Department of Health Services Administration and Policy
College of Public Health, Temple University
Assistant Professor of Dentistry
Department of Oral Health Sciences
Temple University Kornberg School of Dentistry
1301 Cecil B. Moore Ave., Philadelphia, PA 19122-6091
Email: patel.jay@temple.edu

Academic Employment & Affiliations

Assistant Professor of Health Informatics (Tenure Track)	Health Informatics, Department of Health Services Administration & Policy College of Public Heath Temple University	2022-present
Assistant Professor of Dentistry	Department of Oral Health Sciences Kornberg School of Dentistry Temple University	2022-present
Assistant Research Scientist	Department of Health Services Administration & Policy College of Public Heath Temple University	2020 - 2022
Adjunct Assistant Professor	Department of Oral Health Sciences Kornberg School of Dentistry Temple University	2021 - 2022
Adjunct Assistant Professor	Department of Bio-Health Informatics School of Informatics & Computing Indiana University Purdue University Indianapolis	2021- present
Adjunct Assistant Professor of Instruction	Department of Health Services Administration & Policy College of Public Heath Temple University	2021
Informatics Resident	Department of Cariology, Operative Dentistry & Public Health Indiana University School of Dentistry Indiana University Purdue University Indianapolis	2015 - 2020
Graduate Assistant	Department of Bio-Health Informatics School of Informatics & Computing Indiana University Purdue University Indianapolis	2015 - 2020
Research and Teaching Assistant	Department of Health Informatics School of Health-Related Professions Rutgers University	2014-2015

Lecturer	Department of Oral Surgery Ahmedabad Dental College, Gujarat University	2013

Education

Mentoring an Inclusive Network for a Diverse Workforce of the Future (MIND the Future) **Fellow** September 2023 – September 2024	American Academy of Dental, Oral and Craniofacial Research National Institute of Dental, Oral and Craniofacial Research
Doctor of Philosophy (PhD) August 2015 - July 2020 Major: Health Informatics Dissertation title: "Utilizing Electronic Health Record Data to Track Periodontal Disease Change"	Indiana University Purdue University Indianapolis Department of Bio-Health Informatics School of Informatics & Computing Concentration: Health Informatics
Master of Science (MS) January 2014 - August 2015 Major: Biomedical Informatics Thesis title: "Automatic Differential Diagnosis of Periapical Lesions Using Advanced Image Processing Methods"	Rutgers University, the State University of New Jersey Department of Biomedical Informatics School of Health-Related Professionals Concentration: Biomedical Informatics
Bachelor of Dental Surgery (BDS) August 2007 – August 2012 Concentration: Oral Surgery	Rajiv Gandhi University A.J. Institute of Dental Sciences Major: Dental Surgery

Grant Proposals

Ongoing Research Support

1. Project Title: Predictive Modeling of Primary Care Visit Adherence and Emergency Department Use for Patients with Hypertension and Diabetes *(2021 – 2022)*. Funded by Robert Wood Johnson Foundation's (RWJF) Health Data for Action (HD4A) program. Role: Co-Investigator
2. Project Title: Community Vaccine Distribution *(2021 – 2022)* Funded by Philadelphia Department of Public Health. Role: Data Team
3. Project Title: Investigating Oral Health Disparities Between Dental Patients With and Without Mental Health Conditions Using Machine Learning *(2022 – 2023)*. Role: Co-Investigator

Proposal Under Review or Resubmitting

1. **K08.** National Institute of Dental and Craniofacial Research. Early Bone Loss Pattern Detection from Periapical Radiographs Using Deep Learning and Artificial Intelligence. Role: Principal Investigator

2. **R01**. National Library of Medicine. Developing Culturally Specific Communication Strategies to Increase Uptake of COVID-19 Testing and Out-patient Antiviral Medications. Role: Multiple Principal Investigator
3. **R03**. National Institute of Dental and Craniofacial Research. Predicting The Clinical and Social Determinants of Dental Caries Outcome Using a Combined EHR And Census Dataset. Role: Principal Investigator
4. **U01.** Salivary Microbiome and AI Modeling for Prediction of Periodontal Disease: an intra-Collaborative Practice-based Research study (ICPRS at Temple University Kornberg School of Dentistry- TUKSoD and College of Public Health- CPH) Role: Co- Investigator (Lead: AI aim)
5. **R21/R33.** National Institute of Diabetes and Digestive and Kidney Diseases. Utilizing Predictive Modeling and a Clinical Decision Support System to Decrease Primary Care Visit Nonattendance Among Patients with Hypertension and Diabetes. Role: Co-Investigator

Completed Research Support

1. **R21.** National Institute of Dental and Craniofacial Research. Assessing the Oral Health and Dental Treatment Outcomes in Sjogren's Syndrome Patients (2019-2020) Role: Informatics Resident, Graduate Assistant

Not funded

1. **Robert Wood Johnson Foundation Data for Action.** Leveraging Matched Medical-Dental Claims & Electronic Health Record Data to Determine Ideal Periodontal Maintenance Frequency*. Role: Principal Investigator ** submitting this proposal to the national institute of dental and craniofacial research*
2. **Robert Wood Johnson Foundation System for Action.** Connecting Medical, Dental, Social, and Public Health Systems to Address Structural Barriers to Effective Dental Care*. Role: Principal Investigator ** submitting this proposal to the national institute of dental and craniofacial research*
3. **R01**. National Library of Medicine. Develop an integrated multimodal platform for monitoring and analyzing tele-PT outcomes. Role: Co-Investigator

Peer Reviewed Papers

1. **Patel, J.**, Zhan, S., Siddiqui, Z., Dzomba, B., & Wu, H. (2023). Automatic Identification of Self-Reported COVID-19 Vaccine Information from Vaccine Adverse Events Reporting System. Methods of Information in Medicine. http://dx.doi.org/10.1055/s-0042-1760248

2. **Patel, J.**, Shinc, D., Willisa, L., Zaia, A., Thyvalikakatha, T.D. (2023). Feasibility of Utilizing Electronic Dental Record Data and Periodontitis Case Definition to Automate Diagnosis. MedInfo 2023. *Accepted for publication & in-print*.

3. **Patel, J.**, Wu, H. (2023). Utilizing Electronic Dental Records to Predict Neuro-Degenerative Diseases in a Dental Setting: A Pilot Study. MedInfo 2023. *Accepted for publication & in-print*.

4. **Patel, J.**, Yao, L., Vinab, E., Fleecec, D., Jayatilleke, A., Caricchiod, R., Wu, H. (2023). Phenotype Systemic Lupus Erythematous Patients from EPIC Cosmos. MedInfo 2023. *Accepted for publication & in-print*

5. Cejudo Grano de Oro, J. E., Koch, P. J., Krois, J., Garcia Cantu Ros, A., **Patel, J.,** Meyer-Lueckel, H., & Schwendicke, F. (2022). Hyperparameter Tuning and Automatic Image Augmentation for Deep Learning-Based Angle Classification on Intraoral Photographs—A Retrospective Study. Diagnostics, 12(7), 1526.

6. **Patel, J.**, Brandon, R., Tellez, M., Albandar, J. M., Rao, R., Krois, J., & Wu, H. (2022). Developing Automated Computer Algorithms to Phenotype Periodontal Disease Diagnoses in Electronic Dental Records. Methods of information in medicine, 61(S 02), e125–e133. https://doi.org/10.1055/s-0042-1757880

7. **Patel, J**., Su, C., Tellez, M., Albandar, J.M., Rao, R., Iyer, V., Shi, E., Wu, H. (2022). Developing and Testing a Prediction Model for Periodontal Disease Using Machine Learning And Big Electronic Dental Record Data. Frontiers in Artificial Intelligence. 5:979525. https://doi.org/10.3389/frai.2022.979525

8. Li S., Williams K., Medam J., **Patel, J.,** Gonzalez T., Thyvalikakath, T. P. (2022). Retrospective Study of the Reasons and Time Involved for Dental Providers' Medical Consults. Accepted for publication in the Journal of Frontiers in Digital Health. 10.3389/fdgth.2022.83853

9. **Patel, J**., Su, C., Tellez, M., Jiannan, L., Wu, H. (2022). Usability and Clinical Workflow Assessment of an AI-Empowered Perio-Risk Scoring System. In AMIA Clinical informatics Conference Proceedings. (Vol. 2022, p. 1442).

10. **Patel, J**. S., Vo, H., Nguyen, A., Dzomba, B., & Wu, H. (2022). A Data-Driven Assessment of the US Health Informatics Programs and Job Market. Applied Clinical Informatics, 13(02), 327-338 DOI: 10.1055/s-0042-1743242

11. **Patel, J**., Dzomba, B., and Wu, H. (2022). "Think Outside the Box" - Ten Commandments in Providing Optimal Health Informatics Education. Accepted for publication in the IEEE International Conference on Healthcare Informatics. 10.1109/ICHI54592.2022.00115

12. **Patel, J**., Dzomba, B., Vo, H., Von Nessen-Scanlin, S., Siminoff, L. and Wu, H. (2022). A Health IT-Empowered Integrated Platform for Secure Vaccine Data Management and Intelligent Visual Analytics and Reporting. In Proceedings of the 15th International Joint Conference on Biomedical Engineering Systems and Technologies - HEALTHINF, ISBN 978-989-758-552-4, pages 522-531. DOI: 10.5220/0010843700003123

13. **Patel, J**., Rao R., Tellez M. Albandar M., Joachim K., Wu, H. Natural Language Processing Applications to Extract Periodontal Disease and Medical History Information from Electronic Dental Records (2022). Accepted to International Conference of Medical and Health Informatics. https://doi.org/10.1145/3545729.3545744

14. **Patel, J**., Su C., Wu, H. (2022). Predictive Modeling of Periodontal Disease Risks Using Electronic Dental Records and Explainable Machine Learning. American Medical Informatics Association Artificial Intelligence Showcase. (Vol. 2022, p. 36).

15. Rohrer, C., Krois, J., **Patel, J.**, Meyer-Lueckel, H., Rodrigues, J. A., & Schwendicke, F. (2022). Segmentation of dental restorations on panoramic radiographs using deep learning. Diagnostics, 12(6), 1316.

16. Voytek, J., Maltepes, M., Lengner, A., **Patel, J**.*, Wu, H. (2022). An Integrated Interactive COVID-19 Dashboard for Individual Risk Analysis and Real-time Trend Analysis. BMC Medical Informatics and Decision Making (in-print).

17. Jones, J., **Patel, J**., (2021).Health Informatics Education: from Content-Based Courses to Competency- Driven Curricula. Accepted for publication in the American Medical Informatics Association Conference Proceedings. https://amia.org/education-events/linking-informatics-and-education-academic-forum-lieaf/afs07-health-informatics

18. **Patel, J**., Lai, P., Dormer, D., Gullapelli, R., Wu, H., & Jones, J. J. (2021). Comparison of Ease of Use and Comfort in Fitness Trackers for Participants Impaired by Parkinson's Disease: An exploratory

study. In AMIA Annual Symposium Proceedings (Vol. 2021, p. 505). American Medical Informatics Association. PMCID: PMC8378622

19. **Patel, J**., Mehta, S., Mital, D., Singhal, V., Srinivasan S., Siddiqui Z., & Wu, H., (2021). Feasibility of Automatic Differential Diagnosis of Endodontic Origin Periapical Lesions: A pilot study. Int. J. of Medical Engineering and Informatics, 57(5-06), 253–260. DOI: 10.1504/IJMEI.2022.10044462

20. Siddiqui, Z., Wang, Y., **Patel, J**., & Thyvalikakath, T. (2021). Differences in medication usage of dental patients by age, gender, race/ethnicity and insurance status. Technology and Health Care, (Preprint), 1-10. DOI: 10.3233/THC-202171

21. Watson, J. I., **Patel, J**. S., Ramya, M. B., Capin, O., Diefenderfer, K. E., Thyvalikakath, T. P., & Cook, N. B. (2021). Longevity of Crown Margin Repairs Using Glass Ionomer Cement: A Retrospective Study. Operative Dentistry, 46(3), 263-270. DOI: 10.2341/20-062-C

22. Alzeer, A., Jones, J. F., Bair, M. J., Liu, X., Alfantoukh, L. A., **Patel, J**., & Dixon, B. E. (2020). A Comparison of Text Mining Versus Diagnostic Codes To Identify Opioid Use Problem: A Retrospective Study. 05 March 2020, Research Square (Preprint). DOI: 10.21203/rs.3.rs-16124/v1

23. Holden, R. J., Binkheder, S., **Patel, J**., & Viernes, S. H. P. (2018). Best practices for health informatician involvement in interprofessional health care teams. Applied clinical informatics, 9(01), 141-148. DOI: 10.1055/s-0038-1626724

24. **Patel, J**., Mowery, D., Krishnan, A., & Thyvalikakath, T. (2018). Assessing information congruence of documented cardiovascular disease between electronic dental and medical records. In AMIA Annual Symposium Proceedings (Vol. 2018, p. 1442). American Medical Informatics Association. PMCID: PMC6371326

25. **Patel, J**., Siddiqui, Z., Krishnan, A., & Thyvalikakath, T. P. (2018). Leveraging electronic dental record data to classify patients based on their smoking intensity. Methods of information in medicine, 57(05/06), 253-260. DOI: 10.1055/s-0039-1681088

26. **Patel, J**., Siddiqui Z, Krishnan A, Thyvalikakath T. Identifying patients' smoking status from electronic dental records data. Stud Health Technol Inform. 2017; 245:1281.

27. Wang Y, Siddiqui, Krishnan A, **Patel, J**., Thyvalikakath T. Extraction and evaluation of medication data from Electronic Dental Records. Stud Health Technol Inform. 2017; 245:1290.

Submitted Journal Papers

1. **Patel, J.**, Kumar, K., Zai, A., Shin, D., Willis, L., Thyvalikakath, T.P. (2023). Feasibility of Utilizing Longitudinal Electronic Dental Record Data to Track Periodontal Disease Change. Submitted to Scientific Reports.
2. **Patel, J**., Ogwo, C., Schueck, M., Ginu, N., Wu, H., Yucel, R., Tellez, M., Ismail, A. (2023). Machine Learning Based Dental Caries Prediction Model Using Matched Electronic Dental Records and Social Determinants of Health Data. Submitted to AMIA IA Showcase.
3. **Patel, J**., Shin, D., Willis, L., Zai, A., Kumar, K., Thyvalikakath, T.P. (2023). Gingivitis Diagnoses Using 2017 Classification Versus Pre-2017 Criteria: A Retrospective Study Using Electronic Dental Record Data. Submitted to Scientific Reports.
4. Wu, H., Alizadeh, J. M., **Patel, J.,** Hollin, I., Tajeu, G., Phan, T. T.D., Mullachery, P. (2023). Prediction of Emergency Visits of Diabetic Patients Using Integrated Social Determinants of Health with

Electronic Medical Records. Submitted to AMIA AI Showcase.

Patent

1. **Patel, J.**: Inventor; Differential diagnosis of periapical diseases based on results of image analysis. US patent WO201,708,3709 https://portal.uspto.gov/pair/PublicPair.

Peer Reviewed Abstracts and Presentations

1. Dzomba, B., **Patel, J.**, Pratico, D., Shi, X. and Wu, H (2023). Challenges of exploring social factors associated to Alzheimer's Disease patients and comparing AD patient cohorts using Epic Cosmos. Proceedings of the International Conference on Intelligent Biology and Medicine.

2. Wu, H., **Patel, J.,** Tajeu, G., Hollin, I., Yucel, R (2023). Challenges in heterogeneous medical data from multi-EHR Systems: A case study. Proceedings of the International Conference on Intelligent Biology and Medicine.

3. **Patel, J.**, Almalki, A., Patel, K., Ogwo, C., Yang, J., Albandar, J.M., Tellez, M., Wu, H., Latecki, L. (2022). Evaluating Quality of Periapical and Bitewing Radiographs in Electronic Dental Records. American Association for Dental, Oral, and Craniofacial Research, 2023 (Accepted).

4. **Patel, J.**, Shi, X., Pratico, D., Dzomba, B., and Wu, H (2023). Association and Risk Factor Identification between Periodontitis and Alzheimer's Disease using Electronic Dental Record Data. Proceedings of the International Conference on Intelligent Biology and Medicine.

5. Wu, H, **Patel, J**., Liu, F., Gerber, B., and Martinez, O (2023). The Intersections of Demographics, Social Vulnerability, and HIV: Assess Health Disparities for People Living with HIV. Proceedings of the International Conference on Intelligent Biology and Medicine. (in-print)

6. Zhan, S., **Patel, J**., and Wu, H. (2022). Development of a Natural Language Processing Application on COVID-19 Vaccine Adverse Effect Reports in the FDA Vaccine Adverse Events Reporting System (VAERS). Annual Meeting of Academy Health. (2022)

7. DGomez, G, Rajendran D, **Patel, J.**, Bandaru H, Smith J, Grannis S, Hugenberg S, Zunt S, Zero D, Thyvalikakath TP. Identifying Sjogren's Syndrome patients using matched electronic dental-health record data. American Association for Dental Research. Journal of Dental Research 100 Spec Iss: Abstract, 2021.

8. **Patel, J**., Zai A, Shin D, Willis L, Kumar K, Jones J, Thyvalikakath TP. Retrospective Study of Deriving Periodontal Disease Diagnoses from Periodontal Findings. J Dent Res 99 Spec Iss: A, abstract, 2020.

9. Mandula R, Zai A, **Patel, J.,** Thyvalikakath TP. Improving Phenotyping of Patients' Diabetes Status from Electronic Dental Record. Journal of Dental Research 99 Spec Iss: A, abstract, 2020.

10. Medam J, Williams K, **Patel, J**., Thyvalikakath TP. Reasons, Information, and Time: Exploration of Dental Clinician-Initiated Medical Consultations, AMIA 2019 Annual Symposium.
11. **Patel, J.**, Zai H, Thyvalikakath TP. Utilizing Electronic Dental Record Data to Monitor Periodontal Disease Progression. MCBK, abstract 2019.

12. Medam J, Williams K, **Patel, J.**, Thyvalikakath TP. Reasons, Information, and Time: Exploration of Dental Clinician-Initiated Medical Consultations, AMIA 2019 Annual Symposium.

13. Medam J, Williams K, **Patel, J.**, Gonzales T, Thyvalikakath T. Qualitative Exploration of Factors Associated with Dental Provider Initiated Medical Consultations. J Dent Res Vol C: 2018. 0002.

14. Orenstein D, Dhankhar U, **Patel, J**., Gonzalez T, Oldham J, Krishnan A, Thyvalikakath T. Developing a Gold Standard to Identify Reasons for Denture Remakes. J Dent Res 96 (Spec Iss A): 0171, 2017.

15. **Patel, J**., Krishnan A, Mowery D, Thyvalikakath T. Automated Identification of Patient- reported cardiovascular diseases from Electronic Dental Records J Dent Res 96 (Spec Iss A): 3070, 2017.

16. **Patel, J.**, Siddiqui Z, Krishnan A, Thyvalikakath T. Identifying patients' smoking status from electronic dental records data. Stud Health Technol Inform. 2017; 245:1281.

17. Wang Y, Siddiqui, Krishnan A, **Patel, J.**, Thyvalikakath T. Extraction and evaluation of medication data from Electronic Dental Records. Stud Health Technol Inform. 2017; 245:1290.

18. Wang Y, Siddiqui Z, **Patel, J.**, Thyvalikakath T. Medication Profile of Dental Patients in an Academic Setting. J Dent Res 96 (Spec Iss A): 2514, 2017.

19. Orenstein D, Dhankhar U, **Patel, J.**, Gonzalez T, Oldham J, Krishnan A, Thyvalikakath T. Developing a Gold Standard to Identify Reasons for Denture Remakes. J Dent Res 96 (Spec Iss A): 0171, 2017. (www.iadr.org)

20. **Patel, J.**, Siddiqui Z, Mowery D, Thyvalikakath TP. Annotating patient's smoking status from electronic dental record histories. AMIA 2016 Annual Symposium, Chicago, IL; November 12- 16, 2016.

21. Jones J, Wu H, **Patel, J.**, Kasthurirathne S, An Evaluation of Activity Tracker for Monitoring Parkinson's Disease Patient Outcomes. AMIA 2016 Annual Symposium, Chicago, IL; November 12-16, 2016.

22. **Patel, J.**, Mowery D, Thyvalikakath TP. Representing and annotating coronary artery disease from patient's medical history. J Dent Res 95 Spec Iss: B, abstract 1013, 2016.

23. Radler D, Marcus A, **Patel, J.**, Griegns R, Changes in Dietary Intake among Participants in a University Worksite Wellness Program Using the Dietary Screening Questionnaire, 2015. Rutgers Sch. Of Hlth. Related Professions.

Submitted Abstracts

1. **Patel, J.**, Oaikhena, O., Craig, S., Faulkenberry, G., & Wu, H. (2023). The Global Landscape of Health Informatics: Current State of Electronic Health Records in Africa and India. Submitted to AMIA Annual Symposium Proceedings. American Medical Informatics Association.
2. Wu, H., **Patel, J.**, Liu, F., Gerber, B., and Martinez, O. (2023). The Intersections of Demographics, Social Vulnerability, and HIV: Assess Health Disparities for People Living with HIV. Submitted to AMIA Annual Symposium Proceedings. American Medical Informatics Association.
3. **Patel, J.**, Ogwo, C., Yang, J., Albandar, J.M., Tellez, M., Wu, H. (2023). Developing prediction model to predict treatment outcomes of dental patients with mental illnesses. International Association for Dental, Oral and Craniofacial Research.

Teaching Experience *GL = Guest Lecturer

Course Number	Course Title
2023: HIM 3203 (GL)	Electronic Health Record Systems
2022-present: HIM-5102 (Instructor), Temple University	Application of computer programming in Health Informatics
2021: HIM-5102 (Co-Instructor), Temple University	Application of computer programming in Health Informatics
2021: HIM-5190 (Instructor), Temple University	Special Topics in Health Informatics
2020-2021: EPID-632 (GL)	Methods in Public Health Informatics
2019: INFO-B 668 (Instructor), Indiana University Purdue University Indianapolis (IUPUI) School of Informatics and Computing	Seminar in Interprofessional Collaboration
2018-2019: INFO-B 632, IUPUI School of Informatics and Computing	Data Analysis for Biomedical Informatics
2016-2020: INFO-B 626 (GL), IUPUI School of Informatics and Computing	Human Factors Engineering for Health Informatics
2019: DENT-R 978 (GL and Teaching Assistant), IUPUI School of Dentistry	Introduction to Health Information Technology in Dentistry
2017-2029: INFO-I 600 (GL) Institution: IUPUI School of Informatics and Computing	Professionalism and Pedagogy

Services

- Served as a judge in the Research Competition at the Kornberg School of Dentistry Research Day (2023)
- Served as a speaker and an organizer in the Research Competition at the Kornberg School of Dentistry Research Day (2023)
- Participated as a panelist in the 2023 College of Public Health Teaching Symposium
- Faculty Representor for the Health Informatics Student Club in the College of Public Health (2023)
- Scientific Review Committee Member at the American Medical Informatics Association (AMIA) Artificial Intelligence (AI) showcase (2023-2024)
- Scientific Review Committee Member at the IEEE International Conference on Healthcare Informatics (2023-2024)
- College of Public Health Graduate Council Representer (2023)
- Faculty Search and Screen Committee Member at the Temple University Kornberg School of Dentistry (2022)
- Provided help in developing a Ph.D. in Health Informatics program in the Department of Health Services Administration and Policy, College of Public Health, Temple University (2022)
- Developed courses such as natural language processing, machine learning, and human factor engineering for the Ph.D. in Health Informatics program at the College of Public Health (2022)
- Organized and judged Temple University Data Challenge Competitions (2021-2022)
- Served as a member of the faculty Search and Screen Committee at IUPUI (2016 to 2018)
- Served as a President of the Health Informatics Student Club at IUPUI (2016-2020)
- Organized Dental camps in Ahmedabad rural district, India (2009-2011)

Professional Memberships

Year	Role
2022 - Present	Reviewer, Presenter: American Medical Informatics Association Artificial Intelligence Showcase Proceeding.
2015 - Present	Reviewer, Presenter: American Medical Informatics Association Annual Conference Proceedings.
2015 - Present	Reviewer, Presenter: American Medical Informatics Association Clinical Informatics Conference Proceedings.
2015 - Present	Reviewer, Presenter: American Medical Informatics Association Informatics Summit Conference Proceedings.
2015 – Present	Reviewer, Presenter: American Association for Dental Research, 2015-2020 Annual Conference Proceedings.
2015-Present	Presenter: Indiana Section of the American Association for Dental Research Oral Health Research Institute.
2015 - 2019	Reviewer, Presenter: Medical Informatics (Medinfo) 2015-2019 Annual Conference Proceedings.
2021	Reviewer, Presenter: AMIA Informatics Summit Conference
2021	Presenter: International Conference on Intelligent Biology and Medicine
2022	Presenter: HealthInf Conference
2022	Presenter: AMIA AI showcase

Reviewer

Year	Journal Name
2022-2023	Journal of Biomedical Informatics
2020-2023	Applied Clinical Informatics
2022	Journal of Dentistry
2021	Journal of American Medical Informatics Association
2020, 2021	Methods of Information in Medicine
2021	Journal of Clinical Epidemiology
2021	Journal of Dental Education

Technical and Informatics Skillsets

Skillsets	Description	Tools/Computer Language
Natural Language Processing (NLP)	develop annotation corpora, preprocess data, data segmentation, develop name entity recognition program, evaluate program's performance, mining social media data, Unified Medical Language System (UMLS)	eHost, ANAFORA, Python Package, NLTK, FuzzyUp
Image Processing	preprocess image, noise reduction, image segmentation and enhancement, automatic disease identification from radiographs	Matlab, Maple
Machine Learning, Deep learning, Artificial Intelligence	data preprocessing, data cleaning, support vector machine, decision tree, and random forest machine learning models, TensorFlow	WEKA, R, Python
Statistical Analysis	data preprocessing, data manipulating, descriptive statistics, linear and logistic regression, non-parametric tests, Bayesian statistics	SAS, SPSS, R
Computer Programing Language	basic Python programming, and regular expression generation in Perl	Python (basic), Perl (regular expression)
Developing Models/Database	Models to create a bridge between clinicians and computer engineer personnel, SQL to generate datasets for clinicians	My SQL, Microsoft Access
Electronic Health Record (EHR) Implementation	Workflow analysis, CAD/CAM maintenance in oral radiology, add clinical decision support systems within EHRs, workflow assessment	Contextual Inquiry, Heuristic Evaluation, Focus group interview, Critical task analysis, 3D modeling, Needs Analysis
Clinical Decision Support Systems (CDSS)	Create rule based, expert driven, and data driven CDSS, evaluate performances of CDSS, Implementation of CDSS in clinics	Macgoo decision making, Python
Survey Collection Tools	Designed survey forms to collect longitudinal patient and COVID vaccination data	REDCap

Students Supervised (*Permissions are obtained from the students for their names to be displayed)

Student*	Role
Dr. Zasim Siddiqui	PhD dissertation committee member
Amit Parulekar	PhD dissertation committee member
Maryanne Carroll Tapley	MSHI thesis committee member
Thomas Folkes	MSHI thesis committee member
Dr. Charishma Reddy Thatiparthi	MS thesis committee member
Dr. Isha Shah	MSD residency thesis committee member
Dr. Kajal Patel	Providing mentorship on MPH capstone project
Dr. Amrutha Jakka	MS thesis committee member
Dr. Justin Watson	Provided mentorship for MSD thesis project
Dr. Sahithi Chitneni	Mentored with MS thesis project
Dr. Ramya Mandula	Mentored with MS capstone project
Bolu Oluwalade	Mentored with MS capstone project
Krishna Kumar	Mentored summer intern
Kiran Pillai	Mentored summer intern
Dr. Denise Orenstein	Mentored summer intern
Vishnu Iyer	Mentored High school student
Rishi Rao	Mentored High school student
Evan Shi	Mentored High school student
Dr. Kaushik Sharma	Mentored Dental student
Dr. Ujjwal Dhankar	Mentored Dental student
Dr. Shilpa Shetty	Mentored Dental student

Honors and Fellowships

Year	Honors/Fellowships
2015-2017	Travel awards
2015, 2016	Scholar of High Distinction ($4,000)
2014	Dean’s Excellence Scholarship & Research Award

Professional References

1. Huanmei Wu, Ph.D.
   Professor & Chair, Department of Health Services Administration and Policy Assistant Dean for Global Engagement
   1301 Cecil B. Moore Ave. Philadelphia, PA 19122
   Phone: 215-204-8163, Fax: 215-707-6462
   Email: Huanmei.wu@temple.edu

2. Susan VonNessen-Scanlin BSN, MSN, MBA, DNP
   Associate Dean for Clinical Affairs and Interprofessional Education
   Associate professor
   Department of Nursing
   Email: sv430@temple.edu Phone: 267-625-0627

3. Recai Yucel, Ph.D.
   Professor and Director
   Department of Epidemiology and Biostatistics Temple University, College of Public Health
   Email: recai.yucel@temple.edu, Phone: 215-204-6240 (Office)

4. Vaishali Singhal DMD, PhD, MS
   Program Director Bachelor of Science in Health Sciences Department of Interdisciplinary Studies, Associate Professor Rutgers University, School of Health Professions
   65 Bergen Street Newark, NJ 07107 Room 359A
   Email: singhava@shp.rutgers.edu, 908-889-2517

5. Michael Kowolik, BDS, Ph.D., FDS
   Executive Associate Dean of Faculty Affairs,
   Associate Dean of Global Engagement, Professor Department of Periodontology
   Indiana University School of Dentistry
   Email: mkowolik@iu.edu