

ASHRAF YASEEN, PHD

Associate Professor of Data Science

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📍 Houston, TX

PROFESSIONAL SUMMARY

Associate Professor with 15+ years of experience in Data Science, Artificial Intelligence, and advanced computing systems. Established record of academic excellence with several peer-reviewed publications, including recent contributions in high-impact Q1/Q2 journals, and active involvement in large-scale research initiatives. Recognized for leadership in curriculum development and program design, including the development of Data Science graduate tracks and certificate programs. Extensive teaching experience, delivering courses in data analysis and machine learning using applied, project-based methodologies. Strong commitment to student mentorship, with supervision of capstone projects, master's theses, and doctoral research leading to publications and successful career outcomes. Combines academic rigor with practical expertise in modern AI tools and systems, supported by professional certifications and interdisciplinary collaboration experience. Dedicated to contributing to academic excellence, innovation, and the development of future leaders in data science and artificial intelligence in public health.

BACKGROUND

PROFESSIONAL EXPERIENCE

University of Texas - Health Science Center (UTHealth)

Associate Professor of Data Science (Tenured)

Assistant Professor of Data Science

📍 Houston, TX

📅 2023- present

📅 2018-2023

- Developer & Coordinator, Data Science and Advanced Data Science Certificates
- Developer & Lead Faculty, MS & PhD Track Programs in Data Science
- Manager of the Data Science Software Development Team (Software, Systems, and Infrastructure)
- Secured internal and external funding to support research, infrastructure, curriculum development, and student training
- Designed and delivered courses in machine learning, data analytics, and AI with consistently strong student evaluations
- Mentored PhD and MS students to successful thesis completion, peer-reviewed publications, and career placement

Texas A&M University - Kingsville (TAMUK)

Director, Computational Sciences Lab

Assistant Professor of Computer Science

📍 Kingsville, TX

📅 2016-2018

📅 2014-2018

- Founded and led a high-performance computing and data science lab
- Led ABET accreditation for Computer Science undergraduate program
- Taught core CS courses: operating systems, databases, computing
- Supervised MS theses and capstone projects in AI, systems, and software engineering

Central State University (CSU)

Assistant Professor of Computer Science

📍 Wilberforce, OH

📅 2013-2014

- Delivered undergraduate CS courses and contributed to curriculum modernization

Old Dominion University (ODU)

Graduate Assistant

📍 Norfolk, VA

📅 2007-2012

- **Research Assistant:** Conducted research in bioinformatics, machine learning and high-performance computing
- **Teaching Assistant and Lab Instructor** for Problem Solving and Programming

Jordan University of Science & Technology (JUST)**Lecturer of Computer Information Systems**

✈ Irbid, Jordan

📅 2003-2007

- Taught programming, databases, and information systems
- Supervised student projects and curriculum delivery

Al-Najjar Center**Database Developer** - Designed and implemented relational database systems using Oracle

✈ Irbid, Jordan

📅 2001-2002

Creative Systems**Computer Programmer** - Developed desktop and database-driven applications

✈ Irbid, Jordan

📅 2000-2001

EDUCATION

- | | |
|---|---|
| ❖ PhD., Computer Science – (Bioinformatics, Deep Learning, and HPC)
Old Dominion University (ODU) | 📅 Dec, 2014
✈ Norfolk, VA. USA |
| ❖ M.S., Computer Science – <i>With Distinction</i> - (HPC and Algorithms)
New York Institute of Technology (NYIT) | 📅 Aug, 2003
✈ Old Westbury, NY. USA |
| ❖ B.S., Computer Science & Information Systems - <i>IT Honors List</i>
Jordan University of Science and Technology (JUST) | 📅 Jul, 2002
✈ Irbid, Jordan |

PROFESSIONAL CERTIFICATIONS & LEADERSHIP DEVELOPMENT

- ◆ **IBM AI Engineering** – Professional Certificate ◆ **Generative AI Leader** – Professional Certificate (**Google Cloud**)
- ◆ **Google AI** – Professional Certificate ◆ **Prompting Essentials** – Specialization ◆ **AI Essentials** – Specialization
- ◆ **Project Management** – Professional Certificate (**Google**)
- ◆ **Leadership Problem Solving with AI (Oxford)** ◆ **Executive Communication & Data Leadership** – Specialization
- ◆ **Practical Leadership** ◆ **Developing Yourself as a Leader**

Technical Skills: • Python, R, SQL, C++ • TensorFlow, PyTorch, Keras, Scikit-learn, NLP • Tableau, Interactive Dashboards • Cloud & Data Platforms • HPC Systems, GPUs • Real-time Data Pipelines • Software Engineering

RESEARCH**RESEARCH INTERESTS**

Data Science and Artificial Intelligence
Machine Learning and Deep Learning
Predictive Analytics and Big Data Platforms

Health, Population, and Translational AI
Natural Language Processing and Recommender
Systems

PUBLICATIONS

(†) indicates first/co-first author

(\$) indicates senior/corresponding author

(✕) indicates mentored student

Selected Publications

1. ✕Zitong Zhang, \$Ashraf Yaseen, Hulin Wu. Statistical Interpretation of Word Embedding in Natural Language Processing. *International Journal of Data Science and Analytics* (11.2025) doi.org/10.1007/s41060-025-00955-0
2. ✕Zitong Zhang, \$Ashraf Yaseen, Hulin Wu. Scholarly recommendation system for NIH funded grants based on biomedical word embedding models. *Natural Language Processing Journal* (9.2024) doi.org/10.1016/j.nlp.2024.100095
3. †Ashraf Yaseen, Stacia M. DeSantis, ✕Rachit Sabharwal, et al. Baseline characteristics of SARS-CoV-2 vaccine non-responders in a large population-based sample. *PLoS One* (5.2024) doi.org/10.1371/journal.pone.0303420

4. †Ashraf Yaseen, et al. Integrating, Harmonizing, and Curating Studies with High-Frequency and Hourly Physiological Data: Proof of Concept from Seven Traumatic Brain Injury Datasets. *Journal of Neurotrauma* (11.2023) doi: 10.1089/neu.2023.0023
5. ✕Zitong Zhang, ✕Rachit Sabharwal, §Ashraf Yaseen, et al. An Interactive Online Dashboard with Covid-19 Trends and Data Analysis in Northeast and South Texas. *The Texas Public Health Journal* (2.2023)
6. ✕Zitong Zhang, §Ashraf Yaseen. A Content-Based Dataset Recommendation System for Biomedical Datasets. *6th International Conference on Information and Computer Technologies (ICICT)*. Raleigh, NC, USA (3.2023) doi: 10.1109/ICICT58900.2023.00040
7. ✕Jie Zhu, §Ashraf Yaseen, Luis Leon-Novelo. Incorporating uncertainty quantification for actionable insights and performance improvement of academic recommenders. *Knowledge* (7.2023) doi.org/10.3390/knowledge3030020
8. ✕Zitong Zhang, Braja Gopal Patra, §Ashraf Yaseen, ✕Jie Zhu, ✕Rachit Sabharwal, et al. Scholarly Recommendation Systems: A Literature Survey. *Knowledge and Information Systems* (7.2023) doi.org/10.1007/s10115-023-01901-x
9. Stacia DeSantis, †Ashraf Yaseen, et al. Incidence and predictors of breakthrough and severe breakthrough infections of SARSCoV-2 after primary series vaccination in adults: A population-based survey of 90,000 participants. *Journal of Infectious Diseases* (5.2023) doi: 10.1093/infdis/jiad020
10. Stacia M DeSantis, †Ashraf Yaseen, et al. RE: Incidence of SARS-CoV-2 Breakthrough Infections After Vaccination in Adults: A Population-Based Survey. *Open Forum Infectious Diseases* (11.2023) doi.org/10.1093/ofid/ofad564
11. ✕Jie Zhu, §Ashraf Yaseen, et al. A novel NIH research grant recommender using BERT. *PLoS One* (1.2023) doi: doi.org/10.1371/journal.pone.0278636
12. ✕Jie Zhu, §Ashraf Yaseen. A Recommender for Research Collaborators Using Graph Neural Networks. *Frontiers in Artificial Intelligence* (7.2022) doi.org/10.3389/frai.2022.881704
13. ✕Jie Zhu, Hulin Wu, §Ashraf Yaseen. Sensitivity Analysis of a BERT-based scholarly recommendation system. *FLAIRS Conference Proceedings* (4.2022) doi.org/10.32473/flairs.v35i.130595
14. ✕Jie Zhu, Braja Patra, Hulin Wu, §Ashraf Yaseen. Recommender system of scholarly papers using public datasets. *AMIA Joint Summits on Translational Science* (5.2021) PMID: PMC8378599
15. Braja Patra, Babak Soltanalizadeh, Nan Deng, §Ashraf Yaseen, et al. An Informatics Research Platform to Make Public Gene Expression Time-Course Datasets Reusable for More Scientific Discoveries. *Database* (2020) doi: 10.1093/database/baaa074
16. †Ashraf Yaseen, et al. A Load-Balancing Workload Distribution Scheme for Three-Body Interaction Computation on Graphics Processing Units (GPU). *Journal of Parallel and Distributed Computing* (1.2016) <https://doi.org/10.1016/j.jpdc.2015.10.003>
17. †Ashraf Yaseen, et al. FLEXc: protein flexibility prediction using context-based statistics, predicted structural features, and sequence information. *BMC Bioinformatics* (8.2016) doi: 10.1186/s12859-016-1117-3
18. †Ashraf Yaseen, Yaohang Li. Context-based Features Enhance Protein Secondary Structure Prediction Accuracy. *Journal of Chemical Information and Modeling* (2.2014) doi: 10.1021/ci400647u
19. †Ashraf Yaseen, Yaohang Li. Template-based C8-SCORPION: a protein 8-state secondary structure prediction method using structural information and context-based features. *BMC Bioinformatics* (7.2014) doi: 10.1186/1471-2105-15-S8-S3
20. †Ashraf Yaseen, Yaohang Li. Dinosolve: A Protein Disulfide Bonding Prediction Server using Context-based Features to Enhance Prediction Accuracy. *BMC Bioinformatics* (10.2013) doi: 10.1186/1471-2105-14-S13-S9
21. †Ashraf Yaseen, Yaohang Li. Predicting Protein Solvent Accessibility with Sequence, Evolutionary Information and Context-based Features. *Biotechnology and Bioinformatics Symposium*, Provo, UT (2013).
22. †Ashraf Yaseen, Yaohang Li. Template-based Prediction of Protein 8-states Secondary Structures. *IEEE International Conference on Computational Advances in Bio and Medical Sciences*, New Orleans, LA (2013).
23. †Ashraf Yaseen, Yaohang Li. Enhancing Protein Disulfide Bonding Prediction Accuracy with Context-based Features. *Proceedings of Biotechnology and Bioinformatics Symposium*, Provo, UT (2012).
24. †Ashraf Yaseen, Yaohang Li. Accelerating Knowledge-based Energy Evaluation in Protein Structure Modeling with Graphics Processing Units. *Journal of Parallel and Distributed Computing* (2.2012) doi.org/10.1016/j.jpdc.2011.10.005

25. †**Ashraf Yaseen**, et al. Performance Evaluation of Oracle Semantic Technologies with respect to User Defined Rules. *Proceeding of Database and Expert Systems Applications*, Toulouse, France (8.2011)

Additional Peer-Reviewed Publications

26. Kaiming Bi, ..., **Ashraf Yaseen**, et al. Temporal, Demographic, and Geographic Patterns of Long COVID Incidence in Relation to SARS-CoV-2 Variant Emergence: Insights from the Texas All-Payer Claims Database (TX-APCD). (8.2026) *International Journal of Infectious Diseases*. DOI: 10.1016/j.ijid.2026.109051
27. Sarah Hinds, Claudia Robertson, Jingxiao Chen, **Ashraf Yaseen**, et al. High-frequency physiological measures predict post-admission surgical intervention after severe traumatic brain injury. *Journal of Neurotrauma* (12.2025) doi:10.1177/08977151251395740
28. Kehe Zhang, Jocelyn V Hunyadi, ..., **Ashraf Yaseen**, et al. Increasing COVID-19 Testing and Vaccination Uptake in the Take Care Texas Community-Based Randomized Trial: Adaptive Geospatial Analysis. *Journal of Medical Internet Research* Form Res (2.2025) doi:10.2196/62802
29. Sarah Messiah, Rhiana Abbas, Emma Bergqvist, **Ashraf Yaseen**, et al. Factors Associated with Elevated SARS-CoV-2 Immune Response in Children and Adolescents. *Frontiers in Pediatrics* (8.2024) doi.org/10.3389/fped.2024.1393321
30. Sarah E. Messiah, Yashar Talebi, Michael D. Swartz, **Ashraf Yaseen**, et al. Long-term immune response to SARS-CoV-2 infection and vaccination in children and adolescents. *Pediatric Research* (10.2023) doi.org/10.1038/s41390-023-02857-y
31. Messiah, Sarah E., Michael D. Swartz, Rhiana A. Abbas, **Ashraf Yaseen**, et al. SARS-CoV-2 Serostatus and COVID-19 Illness Characteristics by Variant Time Period in Non-Hospitalized Children and Adolescents. *Children* (4.2023) doi.org/10.3390/children10050818
32. Stacia DeSantis, Luis Leon-Novelo, Michael Swartz, **Ashraf Yaseen**, et al. Methodology to estimate natural- and vaccine-induced antibodies to SARS-CoV-2 in a large geographic region. *PLOS ONE* (9.2022) doi: 10.1371/journal.pone.0273694
33. Sarah Messiah, Tianyao Hao, Stacia DeSantis, **Ashraf Yaseen**, et al. Comparison of Persistent Symptoms Following SARS-CoV-2 Infection by Antibody Status in Nonhospitalized Children and Adolescents. *The Pediatric Infectious Disease Journal* (2022) doi:10.1097/INF.0000000000003653
34. Michael Swartz, Stacia DeSantis, **Ashraf Yaseen**, et al. Antibody duration after infection from SARS-CoV-2 in the Texas Coronavirus Antibody Response Survey. *Journal of Infectious Diseases* (2022) doi:10.1093/infdis/jiac167
35. Sarah Messiah, Stacia DeSantis, Luis Leon-Novelo, **Ashraf Yaseen**, et al. Durability of SARS-CoV-2 Antibodies From Natural Infection in Children and Adolescents. *Pediatrics* (2022) doi.org/10.1542/peds.2021-055505
36. Nan Deng, Canglin Wu, **Ashraf Yaseen**, Hulin Wu. ImmuneData: an integrated data discovery system for immunology data repositories. *Database* (3.2022) doi: 10.1093/database/baac003
37. Melissa Valerio-Shewmaker, Stacia DeSantis, Michael Swartz, **Ashraf Yaseen**, et al. Strategies to Estimate Prevalence of SARS-CoV-2 Antibodies in a Texas Vulnerable Population: Results From Phase I of the Texas Coronavirus Antibody Response Survey. *Frontiers in Public Health* (12.2021) doi: 10.3389/fpubh.2021.753487
38. Sarah Messiah, Melissa Valerio-Shewmaker, Stacia DeSantis, **Ashraf Yaseen**, et al. Estimated Prevalence of SARS-CoV-2 Antibodies in the Texas Pediatric Population. *The Lancet* (2021) http://dx.doi.org/10.2139/ssrn.3868061
39. Cong Zhu, Radhe Mohan, Steven Hsesheng Lin, Goo Jun, **Ashraf Yaseen**, et al. Identifying Individualized Risk Profiles for Radiotherapy-Induced Lymphopenia Among Patients With Esophageal Cancer Using Machine Learning. *JCO Clinical Cancer Informatics* (9.2021) doi: 10.1200/CCI.21.00098
40. Derek W. Brown, Stacia M. DeSantis, **Ashraf Yaseen**, et al. A Novel Approach for Propensity Score Matching and Stratification in the Presence of Multiple Treatments: Application to an EHR-Derived Study of Subarachnoid Hemorrhage. *Statistics in Medicine* (4.2020) doi: 10.1002/sim.8540
41. George Williams, Vahed Maroufy, Laila Rasmy, **Ashraf Yaseen**, et al. Vasopressor Treatment and Mortality Following Non-Traumatic Subarachnoid Hemorrhage: A Nationwide EHR Analysis. *Neurosurgical Focus* (2020) doi: 10.3171/2020.2.FOCUS191002

42. Vahed Maroufy, Pankil Shah, **Ashraf Yaseen**, et al. Gene expression dynamic analysis reveals co-activation of Sonic Hedgehog and epidermal growth factor followed by dynamic silencing. *Oncotarget* (4.2020)
doi: 10.18632/oncotarget.27547
43. Mais Nijim, **Ashraf Yaseen**. HuBum: Energy Efficient Hybrid Mobile Storage Systems using Solid States and Buffer Disks. Journal of Computer Communication and Collaboration (11.2015) DOIC: 2292-1036-2015-04-001-59
44. Zhiqiang Wu, Bin Wang, Chi-Hao Cheng, Dr. Deng Cao, **Ashraf Yaseen**. Software Defined Radio Laboratory Platform for Enhancing Undergraduate Communication and Networking Curricula. *ASEE Conference* (2014)
45. Yaohang Li, **Ashraf Yaseen**. Pareto-based Optimal Sampling Method and Its Applications in Protein Structural Conformation Sampling. *AAAI Workshop on Artificial Intelligence and Robotics Methods in Computational Biology*. Bellevue, WA (2013).
46. Weihang Zhu, **Ashraf Yaseen**, Yaohang Li. DEMCMC-GPU: An Efficient Multi-Objective Optimization Method with GPU Acceleration on the Fermi Architecture. *New Generation Computing* (5.2011) doi.org/10.1007/s00354-010-0103-y

Books

47. Hulin Wu, Jose-Miguel Yamal, **Ashraf Yaseen**, and Vahed Maroufy. Statistics and Machine Learning Methods for EHR Data, From Data Extraction to Data Analytics. United States: CRC Press (2020) ISBN 978-0-367-44239-2

Citation Data: [Scopus](#) and [Google Scholar](#)

RESEARCH FUNDING & GRANTS

Participation in \$80M+ in competitively awarded federal, state, industry, and foundation funding; served as PI or Data Core / Data Science Lead on multiple large-scale initiatives.

Selected Major Grants

1. DeepHIV-AoU: A Multi-modal Deep Learning Framework Leveraging the All of Us Research Program for HIV Precision Prevention - *National Institute of Health (NIH)*
Principal Investigator (Avg. Effort: 25%) **\$459,129** 2026–2028
 Leveraging the All of Us Research Program to develop Transformer-based architectures for HIV risk prediction and prevention trajectories
2. Texas Coronavirus Antibody Response Surveillance (TX CARES) - *Texas Department of State Health Services (TDSHS)*
Co-Investigator & Data Core Lead (Avg. Effort: 27.5%) **\$12,250,878** 2020–2025
 Large-scale population surveillance study examining COVID-19 antibody prevalence, disparities, and trends to inform public health policy.
3. Texas SARS-CoV-2 Variant Sequencing Study - *Texas Department of State Health Services (TDSHS) & CDC*
Co-Investigator & Data Core Lead (Avg. Effort: 12.5%) **\$14,124,185** 2021–2024
 Statewide genomic surveillance to monitor circulating and emerging COVID-19 variants
4. Leveraging FITBIR Data to Improve Clinical Practice in Severe Traumatic Brain Injuries (TBI)
U.S. Department of Defense (DOD) **\$748,708** 2020–2024
Co-Investigator & Data Science Lead (Avg. Effort: 15%)
 Integrated and curated multicenter TBI datasets to study treatment strategies and long-term neurological outcomes.
5. SARS-CoV-2 Surveillance Testing Program for Harris County - *Harris County*
Co-Investigator & Data Core Lead (Avg. Effort: 20%) **\$16,985,172** 2020–2022
 Enhance testing and understand the epidemiology and dynamics of COVID-19 in our Harris County and the city of Houston
6. Rapid Expansion of COVID-19 RT-PCR Testing Capacity (RADx Tech Subaward)
National Institute of Health (NIH) & Clinical Pathology Labs (CPL) **\$206,930** 2021–2021
Co-Investigator & Data Core Lead (Avg. Effort: 25%) - Expand testing for COVID-19 seroprevalence
7. Addressing Social Needs of High-Risk Patients (ACH Model) - *US Department of Health and Human Services (DHHS)*
Co-Investigator & Data Management Lead (Avg. Effort: 15%) **\$2,559,327** 2020–2022
 Developed asynchronous screening and navigation platforms in partnership with major healthcare systems.

8. Computational Sciences Lab - *Office of Research and Sponsored Programs, TAMUK*
Principal Investigator; Center Director **\$93,872** 2016–2018
 Established a multidisciplinary high-performance computing research and training laboratory.
9. NSF-TUES: Software Defined Radio Laboratory Platform - *National Science Foundation (NSF)*
Principal Investigator (Avg. Effort: 20%) **\$100,000** 2013–2014
 Develop cost-effective SDR-based laboratories for undergraduate STEM education.

Additional Funded Projects

10. Multiple Sclerosis Implementation Network (MSIN) - *Novartis Pharmaceuticals Corporation*
Co-Investigator (Avg. Effort: 20%) **\$750,000** 2025–2026
 National clinical and research data infrastructure initiative advancing multiple sclerosis research and care across the US.
11. BioTROOP: Multiomic Analysis of Trauma Resuscitation - *U.S. Army Medical Research Acquisition Activity (USAMRAA)*
Co-Investigator (Avg. Effort: 8%) **\$342,585** 2025–2026
 Companion study to TROOP integrating multiomic analyses from early post-injury biological samples.
12. Trauma Resuscitation with Group O Whole Blood or Products (TROOP) - *National Institute of Health (NIH)*
Co-Investigator (Avg. Effort: 10%) **\$1,905,212** 2024–2026
 Pragmatic, multicenter Phase III randomized clinical trial evaluating whole blood versus component therapy in trauma resuscitation.
13. PHIT Workforce Development Program - *US Department of Health and Human Services (DHHS)*
Co-Investigator (Avg. Effort: 10%) **\$9,213,935** 2021–2025
 Statewide initiative to develop a diverse and inclusive health IT workforce in Texas.
14. RADx-UP Phase II (COVID-19) - *National Institute of Health (NIH)*
Co-Investigator (Avg. Effort: 2%) **\$3,204,351** 2021–2023
 Geospatial modeling and analytics to identify COVID-19 testing deserts and support community-based interventions.
15. Community-Based Workforce Development to Increase COVID-19 Vaccination Equity
US Department of Health and Human Services (DHHS) **\$11,623,660** 2021–2023
Co-Investigator (Avg. Effort: 8%)
 Mobilized community health workforces to improve vaccination access across Texas.
16. COVID-19 Vaccine Hesitancy and Confidence Survey - *Texas Department of State Health Services (TDSHS)*
Co-Investigator (Avg. Effort: 15%) **\$614,079** 2021–2022
 To understand community-level hesitancy toward and confidence in COVID-19 vaccines.
17. RADx-UP Phase I (COVID-19) - *National Institute of Health (NIH)*
Co-Investigator (Avg. Effort: 3%) **\$4,998,788** 2020–2022
 Academic–community partnership to analyze SARS-CoV-2 infection patterns, identify testing gaps and hotspots, and evaluate rapid, multilevel testing interventions in vulnerable, racially diverse communities across three Texas regions.
18. CATCH Healthy Smiles: School-Based Oral Health Intervention - *National Institute of Health (NIH)*
Co-Investigator (Avg. Effort: 7%) **\$4,096,889** 2019–2022
 Planning and testing the effectiveness of a school-based oral health interventions for ethnically diverse, low-income elementary school children in Houston
19. Security Engineering Curriculum and Research Development - *U.S. Department of Homeland Security (DHS)*
Co-Investigator (Avg. Effort: 15%) **\$698,000** 2015–2018
 Develop minor program to prepare engineering and science students for careers in areas related to nation's security.

TEACHING, ADVISING, & CURRICULUM DEVELOPMENT

COURSES TAUGHT

At UTHealth (2018-present)

- **Fundamentals of Data Analytics and Predictions;** Developer and Lead Instructor
Semester (score/5): Spring 2019 (4.13), 2020 (4.32), 2021 (4.46), 2022 (4.30), 2023 (4.51), 2024 (4.55), 2025 (4.33), 2026
- **Machine Learning in Practice;** Developer and Lead Instructor
Semester (score/5): Fall 2018 (4.07), 2019 (4.62), 2020 (4.38), 2021 (4.60), 2022 (4.41), 2023 (4.64), 2024 (4.20), 2025
- **Data Science Computing;** Developer and Instructor. Spring 2020 (4.18)
- **Data Science Programming (Python & R);** Developer and Lead Instructor. Fall 2020 (4.38), Summer 2025
- **Advanced Data Analytic Methods: AI and Deep Learning;** Co-developer and Instructor. Spring 2026

At TAMUK (2014-2018)

- **Database Systems;** Lead Instructor. Spring 2015 (4.35, 4.22), 2016 (4.35, 4.44), 2017 (4.44, 4.43)
- **Operating Systems;** Lead Instructor. Fall 2014 (4.27, 4.22), 2015 (4.42, 4.37), 2016 (4.5, 4.41), 2017 (4.41, 4.43)
- **Bioinformatics Computing;** Developer and Lead Instructor. Summer 2015 (4.25, 4.27), 2016 (4.36, 4.31)
- **Introduction to Bioinformatics;** Developer and Lead Instructor. Summer 2016 (4.30)
- **Cloud Computing;** Developer and Lead Instructor. Summer 2017 (4.34)
- **Computer Communication Networks;** Lead Instructor. Fall 2014 (4.27)

At CSU (2013-2014)

- **Programming in C++, Operating Systems, Database Systems, Computer Networks, Computer Architecture**

At ODU (2007-2010)

- **Problem Solving and Programming I, II**

At JUST (2003-2007)

- **Intro to Computer Science, Programming (C++, VB), Database Applications, Knowledge-based Systems**

STUDENT ADVISING & MENTORSHIP

At UTHealth (2018-present):

PhD Dissertation (Primary Supervisor) / Data Science

	Role	# Of Students	
		Level:	PHD MS
1. Zitong Zhang , PhD (2024). Biomedical Dataset and Research Grant Recommendation Systems	Thesis/Dissertation Supervisor	5	9
2. Jie (Ginny) Zhu , PhD (2022). Virtual Research Assistant for Dataset, Grant, and Collaborator Recommendation	Academic Advisor/Committee Chair	10	3
	Member of the Thesis/Dissertation Committees	16	5
3. Rachit Sabharwal , PhD (Expected 2026). Multimodal Deep Learning for Traumatic Brain Injuries			
4. Tzuruei Chao , PhD (Expected 2026). Deep Learning-Based Prediction of Adolescent HIV Risk Trajectories			
5. Oladipo K. Afolayan , PhD (Expected 2026). Multimodal Deep Learning for Mental Health and Suicide Prevention			
6. Zixi Yang , PhD (Expected 2026). Predicting Alzheimer's Progression via Spatiotemporal Deep Survival Analysis of Longitudinal Vascular Burden			
7. Christin Silos , PhD (Expected 2027). Acute Kidney Injury and Delirium in Critically Ill Children: Epidemiology, Prediction, and Modifiable Risk Factors			

MS Thesis (Primary Supervisor) / Data Science

1. **Mengchen Ding**. (2020) Statistical modeling of stem cell mobilization yield
2. **Nitesh Enduru**. (2021) Genetic and lifestyle risk factors for stroke (ARIC study)
3. **Christin Silos**. (2021) Machine learning models for ischemic stroke length of stay
4. **Rachit Sabharwal**. (2022) Biomedical recommendation system for conferences and journals
5. **Joy Yoo**. (2022) Machine learning prediction of COVID-19 antibody response
6. **Shefali A. Patel**. (2023) Mortality and readmission prediction of chronic obstructive pulmonary disorder
7. **Youssef Benfallah**. (2024) Obesity risk estimation using lifestyle and health factors
8. **Mira Baltaji**. (2025) Machine learning prediction of adult ADHD and bipolar disorder
9. **Syeda B. Hussain**. (2026) Modeling social determinants of childhood obesity and literacy

Committee Chair / Academic Advisor (PhD & MS)

Served as **Chair and Academic Advisor** for **10 PhD students** and **3 MS students** supporting dissertation design, advanced modeling strategies, and interdisciplinary research across: Machine learning & AI, Survival and longitudinal modeling, Neuroimaging and multi-omics, LLMs and quantitative analytics, Causal inference and trial emulation.

Doctoral & Master's Committee Membership

Member of **20+ PhD and MS committees** across: Biostatistics and Data Science, Epidemiology, Environmental and Behavioral Sciences. Providing methodological guidance in: machine learning and deep learning, predictive modeling, high-dimensional data analysis, and health AI applications.

At TAMUK (2014-2018):

Student Supervision / Computer Science

	Role	Level	# Of Students
Primary Thesis Supervisor for 4 M.S. students, with research topics in: Machine learning and text analytics Distributed consensus algorithms Computational biology and protein modeling) Project Supervisor for 19 M.S. students, mentoring applied projects in: Machine learning and recommender systems Sentiment analysis and social media mining Database systems (SQL/NoSQL) Web, mobile, and enterprise application development Software engineering tools and testing frameworks Capstone Project Supervisor for 10 B.S. students, mentoring applied projects in: Database applications Web and mobile applications Software tools	Thesis/Dissertation Supervisor	MS	4
	Project Supervisor	MS	19
	Capstone Project Supervisor	BS	10

At CSU (2013-2014):

	Role	Level	# Of Students
Capstone Project Supervisor for 4 B.S. students, mentoring applied projects in: software, web and mobile applications	Capstone Project	BS	4

Mentorship Philosophy & Impact

- Extensive experience mentoring diverse student populations across multiple institutions and countries.
- Strong record of student-led publications, conference presentations, and applied research outputs.
- Emphasis on hands-on, reproducible research and the ethical application of AI and data science.
- Integration of industry-relevant problems, tools, and workflows to prepare students for academic, industry, and public-sector careers.
- Commitment to developing independent researchers, technical leaders, and future academic faculty.
- Graduates have progressed to graduate programs, industry data and/or computer science roles, and public-sector analytics positions.

HONORS, AWARDS, & RECOGNITION

- ❖ **Recognition for Leadership in Data Science Program Development – UTHealth** 🏆 2023
Acknowledged for contributions to the design, launch, and growth of Data Science degree and certificate programs
- ❖ **Institutional Recognition for the Texas Pandemic Dashboard – UTHealth** 🏆 2022
Recognized for leadership in the design and development of a statewide, public-facing data analytics and visualization platform supporting COVID-19 surveillance and public health decision-making.
- ❖ **Invited Faculty Appointment – PHIT Workforce Development Initiative – UTHealth** 🏆 2021
Invited by the Dean of the School of Public Health in recognition of expertise in data science education, analytics infrastructure, and workforce development.
- ❖ **University Expert (Institutional Appointment) – Texas A&M University–Kingsville** 🏆 2017
Selected among a limited number of faculty recognized for subject-matter expertise at the university level.
- ❖ **Professional Development Award – Center for Teaching Effectiveness, TAMUK** 🏆 2016
- ❖ **Summer Research Award – Office of Research & Sponsored Programs, TAMUK** 🏆 2016

INSTITUTIONAL & PROFESSIONAL SERVICE

ACADEMIC SERVICE, GOVERNANCE & LEADERSHIP

Institutional Leadership & Governance

At UTHealth

- **Program Coordinator & Lead Developer**, *Data Science and Advanced Data Science Certificate Programs* (in-person and online; degree and non-degree) | **2018–Present**
Program Developer, *M.S. and Ph.D. Tracks in Data Science* | **2023–Present**
- **Manager**, *Data Science Software Development Team* | **2018–Present**
- **Co-Chair**, *Data Science Curriculum Committee* | **2018–Present**
Provided academic governance of graduate curriculum, course sequencing, and program learning outcomes.
- Committee **Member**: *Data Science Faculty Search Committee, Dissertation Supervisor Review Committee, Department Promotion Committee, School of Public Health Faculty IT Advisory Committee* | **2018–Present**

At TAMUK

- **Director**, *Computational Sciences Lab* | **2016–2018**
- **Assistant Director**, *ABET Undergraduate Program Review – Computer Science* | **2016–2018**
- Committee **Member**: *Engineering College Council Committee, Graduate Curriculum Committee- EECS, Biomedical Research Group Department, University Scholarship Review Committee* | **2016–2018**

Conference & Professional Society Leadership

- **Chair**, Program Book & Website Committees. *Conference on Big Data and Information Analytics (BigDIA 2018)*
- **Co-Chair**, Local Organizing Committee. (*BigDIA 2018*)
- **Co-Chair**, Program Book & Website Committees. *Applied Statistics Symposium (ICSA 2020)*
- **Publication Chair & Sessions Chair**. *International Symposium on Bioinformatics Research and Applications (ISBRA 2015)*
- Program Committee **Member**: *ISBRA (2015–2017), Conference on Information and Computer Technology (ICT 2014)*

EDITORIAL, PEER REVIEW & SCHOLARLY SERVICE

Journal & Conference Reviewer

- ACM/IEEE Transactions on Computational Biology and Bioinformatics • Journal of Information Science
- BMC Bioinformatics • International Symposium on Bioinformatics Research and Applications (ISBRA)

Grant & Proposal Review

- TAMUK Biomedical Research Group (internal funding review)

Academic Evaluation & Judging

- Poster Judge, UTHealth School of Public Health Research Day
- Judge, TAMUK Engineering Senior Design Conference • Judge, TAMUK Graduate Research Poster Competition

Professional Development & Capacity Building

- Healthcare Hackathon, Rio Grande Valley Health Information Exchange (RGV HIE). Weslaco, TX 11/2019.
- Texas Advanced Computing Center (TACC) Summer Supercomputing Institute. Austin, TX 8/2017
- NSF CAREER Proposal Writing Workshops (Washington, DC 3/2017; Portland, OR 4/2017)
- CCICADA Workshop: Command, Control, and Interoperability Center for Advanced Data Analysis, Reconnect program. Cybersecurity Institute. U.S. Military Academy at West Point, NY. June 12-18, 2016.
- Sustainable Energy Systems - Energy, Electricity and Renewable Energy Resources. TAMUK, 5/2016.
- Grant development workshops and webinars. TAMUK - New Faculty Investment Program 2014-2016

Membership in Professional Societies

- Association for Computing Machinery (ACM)
- Institute of Electrical and Electronics Engineers (IEEE)
- American Public Health Association (APHA)

INVITED TALKS AND PRESENTATIONS *(selected)*

TALKS & PLENARY PRESENTATIONS

- Lack of antibody response in those vaccinated or with natural exposure.
Session: Examining SARS-CoV2 Response Over Time Using a Longitudinal Design (Texas CARES Survey).
American Public Health Association (APHA). Boston, MA. 11/7/2022
- TX CARES Community Update: Lessons Learned & Next Steps. *Healthier Texas Summit*. Austin TX. 10/21/2022
- Data Management and Visualization for the Texas CARES Survey. (**APHA**). Denver, Colorado. 10/25/2021
- Understanding the Human Antibody Response to SARS-CoV-2 in Diverse Populations.
WHO Solidarity II Forum, World Health Organization. 8/27/2021.
Texas CARES Portal: An Interactive Platform to Illustrate and Understand the Human Response to COVID-19.
Texas Department of State Health Services (DSHS) Grand Rounds. 6/16/2021.

REFEREED CONFERENCE PRESENTATIONS & SHORT COURSES

- Presented research and delivered a full-day short course at international conferences including BigDIA, ICSA Applied Statistics Symposium, ISBRA, AAAI, and IEEE, covering topics in data science, machine learning, and biomedical data analytics.

REFEREED POSTERS

- Presented refereed posters at national and international conferences on topics in machine learning, bioinformatics, and data science, including student-led research; recipient of a Best Poster Award at ISBRA

COMMUNITY & PUBLIC ENGAGEMENT

- ✚ Lead and Developer of the Texas Pandemic platform (<http://www.texaspandemic.org/>)
The platform contains maps, graphs and analyses, to provide Texans with a better understanding of COVID-19 trends at the state level, the county level, and within collections of counties (trauma service areas, public health regions, and metropolitan areas). The platform contains visualizations and analyses of COVID19 cases, deaths, vaccinations, hospitalization, and more.