Kevin Desai

Assistant Professor of Computer Science
Office: San Pedro 1 (SPI) 340L
Vision and Immersive Realities Lab (VIRLab) - SPI-340J
The University of Texas at San Antonio,
506 Dolorosa St., San Antonio, TX 78204, USA

kevin.desai@utsa.edu
https://cs.utsa.edu/~kdesai/
Google Scholar
ORCID
LinkedIn

RESEARCH INTERESTS

- Computer Vision - 3D Human Pose and Shape Estimation, 3D Reconstruction (Depth Estimation, Neural Rendering), Medical Image Segmentation
- Immersive Realities (Mixed / Virtual / Augmented Reality)
- Application Domains - telehealth, telerehabilitation, virtual STEM education, virtual training and other serious game applications

EDUCATION

PhD in Computer Science **Jan 2014 - May 2019**
The University of Texas at Dallas, Richardson, TX
Dissertation: Quantifying Experience and Task Performance in 3D Serious Games
GPA: 3.867 out of 4

MS in Computer Science, Intelligent Systems **Aug 2013 - May 2015**
The University of Texas at Dallas, Richardson, TX
GPA: 3.847 out of 4

BTech in Computer Science & Engineering **July 2009 - June 2013**
Nirma University, Ahmedabad, Gujarat, India
GPA: 8.4 out of 10

EMPLOYMENT HISTORY

Computer Science Department, The University of Texas at San Antonio
Assistant Professor **Aug 2022 - Present**
Assistant Professor of Instruction **Sept 2019 - July 2022**
Engaging in research activities with other professors and collaborators. Mentoring PhD, MS, and undergraduate students in research activities. Teaching numerous CS courses at graduate and undergraduate level.

Mobiweb Inc.
Research Scientist **Jun 2019 - Aug 2019**
Worked on 3D human reconstruction performing camera calibration research. Designed approaches to reduce the calibration errors for multiple RGB-D cameras looking at a small scene. Conducted studies to help establish a quality metric for camera calibration in combination with the 3D reconstruction algorithm.

Multimedia Systems Lab, The University of Texas at Dallas
Graduate Research Assistant **May 2014 - May 2019**
Worked on 3D Tele-Immersion (3DTI) project which uses RGB-D data from multiple Microsoft Kinects to generate the 3D model. Several tasks involved are skeleton identification, mesh generation, combining multiple meshes, prediction and real time transmission.

Facebook Reality Labs - Oculus Research
Interaction & Experiences Research Intern **May 2018 - Aug 2018**
Worked in the hand tracking team within Oculus, developed different interactions and experiences for hands in Virtual Reality and Augmented Reality devices as well as conducted user studies to test them. Worked in the areas of VR/AR and Human Computer Interaction.

Apple Inc.
Visual Experience - Display Engineering Intern **Jan 2017 - May 2017**
Worked on prototyping new applications (both hardware and software) for different types of emerging displays, as well as assisted with internal user studies to test novel displays on human viewers. Worked in the interdisciplinary areas of image processing, vision science and optics.

Samsung India Electronics Pvt. Ltd.
Software Engineer Intern **Dec 2012 - May 2013**
Worked in the Systems team, taking care of Device I/O and LCD Porting, for new phones to be launched. Also, debugging and bug fixing the old phones facing issues in the market.

AWARDS & HONORS

- Nominated for Service Excellence Award, UTSA University Excellence Faculty Awards, 2025.
- Outstanding Teaching Award, UTSA Computer Science Department, 2022.
- Nominated for Teaching Excellence Award, UTSA President's Distinguished Faculty Awards, 2022.
- Nominated for Rising Star Award, UTSA University Excellence Staff Awards, 2022.

FUNDING - RESEARCH

Active Projects

1. Identifying Bias in STEM Workplaces Towards Persons with Disabilities
   Agency: UTSA VPR Office - Special Research Award: Research Interest Groups (SRA RIG)
   Amount: $20,000
   Role: Co-PI (33%)
   Investigators: John Quarles, Kathy Ewoldt, Kevin Desai
   Timeline: 12/2024 - 07/2025
2. HCC: Medium: Adaptive Auditory Feedback to Improve Balance in Virtual Reality at Home
   Agency: NSF - (CISE) Core Programs - Medium
   Amount: $1,200,000
   Role: Co-PI (33%)
   Investigators: John Quarles, Kevin Desai, Alberto Cordova
   Timeline: 10/2024 - 09/2027
3. Exploring Online Learning in VR-Supported STEM Laboratories
   Agency: UTSA VPR Office - UTSA-ITESM Seed Funding Program
   Amount: $40,000 ($80,000 total)
   Role: PI (50%)
   Investigators: Kevin Desai, John Quarles + ITESM (Genaro Zavala-Enriques)
   Timeline: 06/2024 - 05/2025
4. HCC: Small: Making Virtual Reality Safe
   Agency: NSF - (CISE) Core Programs - Small
   Amount: $600,000
   Role: Co-PI (50%)
   Investigators: John Quarles, Kevin Desai
   Timeline: 01/2024 - 12/2026
5. Collaborative Research: HCC: Medium: HCI in Motion – Using EEG, Eye Tracking, and Body Sensing for Attention-Aware Mobile Mixed Reality
   Agency: NSF - (CISE) Core Programs - Medium
   Amount: $457,105
   Role: Co-PI (50%)
   Investigators: John Quarles, Kevin Desai
   Timeline: 09/2022 - 08/2025

6. CRII: HCC: 3D Hand & Full-Body Pose Estimation in Telehealth for Children with Autism
   Agency: NSF - (CISE) Research Initiation Initiative (CRII) 2021
   Amount: $174,368
   Role: PI (100%)
   Investigators: Kevin Desai
   Timeline: 06/2022 - 05/2025

Past Projects

7. LIGHT-SEAL: Hardware Trojan Aware Photonic Transformer for Secured Generative AI
   Agency: UTSA VPR Office - SDS-OCI Collaborative Seed Funding Grant
   Amount: $35,000
   Role: Co-PI (50%)
   Investigators: Dharnidhar Dang, Kevin Desai
   Timeline: 07/2024 - 12/2024
8. Towards Personalized Virtual Reality Interventions for Rehabilitation of Persons with Disabilities
   Agency: UTSA VPR Office - MAC-UTSA Seed Funding Program
   Amount: $25,000
   Role: Co-PI (33%)
   Investigators: John Quarles, Kevin Desai, Alberto Cordova
   Timeline: 10/2023 - 06/2024
9. Electronic Health Record Big Data and Radiomic Analytics for Precision Medicine Approach to Long-COVID
   Agency: San Antonio Partnership for Precision Therapeutics (SAPPT)
   Amount: $50,000
   Role: Co-PI (25%)
   Investigators: Dhireesha Kudithipudi, Kevin Desai, Anandi Dutta
   Timeline: 08/2022 - 02/2024
10. A step towards smart and connected health in behavior analysis
    Agency: UTSA VPR Office - GREAT 2021
    Amount: $20,000
    Role: Co-PI (25%)
    Investigators: Leslie Neely, Peyman Najafirad, Qian Chen, Kevin Desai
    Timeline: 10/2021 - 07/2022

Under Review

11. Unveiling Paleobiological Dynamics through Deep Learning in the Mesozoic Era
    Agency: NSF - Sedimentary Geology and Paleobiology (SGP)
    Amount: $800,000
    Role: Co-PI (50%)
    Investigators: Alexis Godet, Kevin Desai
    Timeline: 06/2025 - 05/2028
12. Collaborative Research: Walking in Their Shoes: The Role of Evidence-based, Immersive, AI-coached Environments in Cultivating Prosocial Behaviors among STEM Undergraduates
    Agency: NSF I-USE
    Amount: $100,000 ($400,000 total)
    Role: PI (100%)
    Investigators: Kevin Desai + UT-Tyler (ShinHee Jeong, Sangok Yoo, Sagnik Dakshit)
    Timeline: 06/2025 - 05/2027

13. Collaborative Research: Enhancing collaboration and embodied learning in online virtual reality STEM laboratories through high-fidelity interactive avatars
Agency: NSF RITEL
Amount: $600,000 ($900,000 total)
Role: PI (50%)
Investigators: Kevin Desai, John Quarles + SMU (Prajakt Pande)
Timeline: 10/2025 - 09/2028

14. Collaborative Research: HCC: Medium: AbilityXR: Advancing VR-based Disability Simulation to Decrease Bias Towards Persons with Movement Disorders
Agency: NSF - (CISE) Core Programs - Medium
Amount: $900,878
Role: Co-PI (33%)
Investigators: John Quarles, Kathy Ewoldt, Kevin Desai
Timeline: 10/2025 - 09/2029

FUNDING - INSTRUCTIONAL

Active Projects

15. Broadening Participation in Computer Science
Agency: Northeastern University - Center for Inclusive Computing
Amount: $499,801
Role: Co-PI (10%)
Investigators: Jianwei Niu, John Heaps, Amanda Fernandez, Mitra Bokaei Hosseini, Kevin Desai, Rocky Slavin
Timeline: 01/2024 - 12/2025

Past Projects

16. Project Lovelace 2.0: Advancing Women in AI Career Pathways
Agency: Xilinx Inc. WIT University Grants 2021
Amount: $30,000
Role: Co-PI (33 %)
Investigators: Dhireesha Kudithipudi, Amina Qutub, Kevin Desai
Timeline: 09/2021 - 08/2022

FUNDING - SERVICE

Active Projects

17. MATCH: MATRIX AI/ML Concierge for Healthcare
Agency: NIH (UNT Passthrough)
Amount: $500,000
Role: Co-PI (10%)
Investigators: Dhireesha Kudithipudi, Amina Qutub, Mark Goldberg, Ambika Mathur, Kevin Desai, Panagiotis Markopoulos, Erica Sosa
Timeline: 10/2024 - 09/2025

Past Projects

18. M-POWER: MATRIX-Provided AI/ML Open-Source Resource Center for Behavioral Health EmpoWERment
Agency: NIH (UNT Passthrough)

Amount: $500,000
Role: Co-PI (10%)
Investigators: Dhireesha Kudithipudi, Amina Qutub, Mark Goldberg, Ambika Mathur, Kevin Desai, Panagiotis Markopoulos, Anandi Dutta, Erica Sosa
Timeline: 10/2023 - 07/2024

PUBLICATIONS

	All	Since 2020
Citations	349	304
h-index	10	9
i10-index	10	9

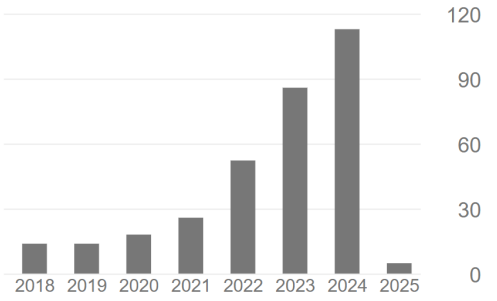

Figure 1: Google Scholar Citation Chart as of 01/10/2025

UTSA students are marked as underscore

1. Mubashshira, Sadia, and **Kevin Desai**, "TE-NeRF: Triplane-Enhanced Neural Radiance Field for Artifact-Free Human Rendering." In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), Workshops, 2025. **Accepted for Publication**
2. Eghbalian, Ayda, Mushfiqur Azam, Katie Holloway, Leslie Neely, and **Kevin Desai**, "Applying Computer Vision to Analyze Self-Injurious Behaviors in Children with Autism Spectrum Disorder." In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), Workshops, 2025. **Accepted for Publication**
3. Mahmud, Hasanul, Palden Lama, **Kevin Desai**, and Sushil K. Prasad, "EncodeNet: A Framework for Boosting DNN Accuracy with Entropy-Driven Generalized Converting Autoencoder." In International Conference on Pattern Recognition, pp. 463-477. Cham: Springer Nature Switzerland, 2024.
   Acceptance Rate: 45.7%
   H-5 Index (Median): 56 (91)
4. Setu, Jyotirmay Nag, Joshua M. Le, Ripan Kumar Kundu, Barry Giesbrecht, Tobias Höllerer, Khaza Anuarul Hoque, **Kevin Desai**, and John Quarles. "Mazed and Confused: A Dataset of Cybersickness, Working Memory, Mental Load, Physical Load, and Attention During a Real Walking Task in VR." In 2024 IEEE International Symposium on Mixed and Augmented Reality (ISMAR), pp. 1048-1057. IEEE, 2024.
   Acceptance Rate: 30.4%
   H-5 Index (Median): 25 (35)
5. Mahmud, Hasanul, Peng Kang, **Kevin Desai**, Palden Lama, and Sushil K. Prasad, "CAE-Net: Enhanced Converting Autoencoder Based Framework for Low-Latency Energy-Efficient DNN with SLO-Constraints." In 2024 IEEE Cloud Summit, pp. 128-134. IEEE, 2024.

6. Mahmud, Hasanul, Peng Kang, **Kevin Desai**, Palden Lama, and Sushil K. Prasad, "A converting autoencoder toward low-latency and energy-efficient DNN inference at the edge." In 2024 IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW), pp. 592-599. IEEE, 2024.

7. Tasnim, Umama, Rifatul Islam, **Kevin Desai**, and John Quarles, "Investigating Personalization Techniques for Improved Cybersickness Prediction in Virtual Reality Environments." IEEE Transactions on Visualization and Computer Graphics (2024).
Acceptance Rate: 12.6%
Impact Factor: 4.7
H-5 Index (Median): 89 (124)

8. Azam, Md Mushfiqur, and **Kevin Desai**, "A Survey on 3D Egocentric Human Pose Estimation." Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition. 2024.
Acceptance Rate: 40%
H-5 Index: 115 (178)

9. Neely, Leslie, Amarie Carnett, John Quarles, Hannah MacNaul, Se-Woong Park, Sakiko Oyama, Guenerve Chen, **Kevin Desai**, and Peyman Najafirad, "The case for integrated advanced technology in applied behavior analysis." Advances in Neurodevelopmental Disorders 7, no. 3 (2023): 415-425.
H-5 Index: 10
Impact Factor: 1.22

10. Shang, Sijie, Rong Jin, and **Kevin Desai**, "A Study of Human Fitness Pose Classification Using Artificial Neural Networks." In 2023 International Conference on Information Technology (ICIT), pp. 250-255. IEEE, 2023.
Acceptance Rate: 50.3%
H-5 Index: 13

11. (Non-Reviewed) **Desai, Kevin**, Omeed Ashtiani, and Balakrishnan Prabhakaran, "Assessment HTN (A-HTN) for Automated Task Performance Assessment in 3D Serious Games." arXiv preprint arXiv:2302.05795 (2023). https://www.mdpi.com/1424-8220/23/2/929

12. Young, Paul, Nima Ebadi, Arun Das, Mazal Bethany, **Kevin Desai**, and Peyman Najafirad. "Can Hierarchical Transformers Learn Facial Geometry?." Sensors 23, no. 2 (2023): 929.
Impact Factor: 3.85

13. Islam, Rifatul, **Kevin Desai**, and John Quarles, "Towards Forecasting the Onset of Cybersickness by Fusing Physiological, Head-tracking and Eye-tracking with Multimodal Deep Fusion Network." In 2022 IEEE International Symposium on Mixed and Augmented Reality (ISMAR), pp. 121-130. IEEE, 2022.
Acceptance Rate: 21%
H-5 Index (Median): 25 (35)

14. Peng, Kebin, John Quarles, and **Kevin Desai**, "PMPNet : Pixel Movement Prediction Network for Monocular Depth Estimation in Dynamic Scenes." In 2022 26th International Conference on Pattern Recognition (ICPR), pp. 3915-3921. IEEE, 2022.
Acceptance Rate: 47.8%
H-5 Index (Median): 43 (61)

15. Khargonkar, Arun, **Kevin Desai**, Balakrishnan Prabhakaran, and Thiru Annaswamy. "VIRTEPEX: Virtual Remote Tele-Physical Examination System." In Designing Interactive Systems Conference (DIS '22). Association for Computing Machinery, New York, NY, USA, 1729–1742.
Acceptance Rate: 21.5%
H-5 Index (Median): 41 (58)

16. Peng, Kebin, John Quarles, and **Kevin Desai**. "BRDF-Based Irradiance Image Estimation to Remove Radiometric Differences for Stereo Matching." In Proceedings of the 17th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory

and Applications - Volume 5: VISAPP, ISBN 978-989-758-555-5; ISSN 2184-4321, pages 734-744. 2022.
H-5 Index (Median): 19 (31)

17. Peng, Kebin, Rifatul Islam, John Quarles, and **Kevin Desai**, "TMVNet : Using Transformers for Multi-View Voxel-Based 3D Reconstruction." In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition, pp. 222-230. 2022.
Acceptance Rate: 60%
H-5 Index (Median): 89 (154)

18. Medjaouri, Omar, and **Kevin Desai**, "HR-STAN: High-Resolution Spatio-Temporal Attention Network for 3D Human Motion Prediction." In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition, pp. 2540-2549. 2022.
BEST PAPER AWARD (6% chance)
H-5 Index (Median): 89 (154)

19. Bendre, Nihar, **Kevin Desai**, and Peyman Najafirad. "Show Why the Answer is Correct! Towards Explainable AI using Compositional Temporal Attention." In 2021 IEEE International Conference on Systems, Man, and Cybernetics (SMC), pp. 3006-3012. IEEE, 2021.
H-5 Index (Median): 32 (47)

20. Islam, Rifatul, **Kevin Desai**, and John Quarles. "Cybersickness Prediction from Integrated HMD's Sensors: A Multimodal Deep Fusion Approach using Eye-tracking and Head-tracking Data." In 2021 IEEE International Symposium on Mixed and Augmented Reality (ISMAR), pp. 31-40. IEEE, 2021.
Acceptance Rate: 23.6%
H-5 Index (Median): 25 (35)

21. Bendre, Nihar, **Kevin Desai**, and Peyman Najafirad. "Generalized Zero-Shot Learning Using Multimodal Variational Auto-Encoder With Semantic Concepts." In 2021 IEEE International Conference on Image Processing (ICIP), pp. 1284-1288. IEEE, 2021.
Acceptance Rate: 46%
H-5 Index (Median): 60 (89)

22. Guzman, Herbert, Reenam Joshi, Victor Guzman, Max Kilger, and **Kevin Desai**. "Multimodal Data Streaming using Visual IoTs and Wearables for Telerehabilitation and Teletreatment." In 2021 World Automation Congress (WAC), pp. 233-238. IEEE, 2021.
H-5 Index (Median): 13 (20)

23. **Desai, Kevin**, Balakrishnan Prabhakaran, Nneka Ifejika, and Thiru M. Annaswamy. "Personalized 3D exergames for in-home rehabilitation after stroke: a pilot study." Disability and Rehabilitation: Assistive Technology (2021): 1-10.
H-5 Index (Median): 35 (57)
Impact Factor: 2.5

24. Annaswamy, Thiru, Balakrishnan Prabhakaran, Nneka Ifejika, **Kevin Desai**, "Innovative Augmented-Reality Based Customized Gaming Solutions for Home Exercises Following Stroke," Presentation Symposium at the 96th Annual ACRM Conference: Progress in Rehabilitation Research, Nov 6, 2019.

25. Bahirat, Kanchan, Yu-Yen Chung, Thiru Annaswamy, Gargi Raval, **Kevin Desai**, Balakrishnan Prabhakaran, and Michael Riegler. "Using mr. mapp for lower limb phantom pain management." In Proceedings of the 27th ACM International Conference on Multimedia, pp. 1071-1075. 2019.
Acceptance Rate: 27%
H-5 Index (Median): 65 (107)

26. **Desai, Kevin**, Balakrishnan Prabhakaran, and Suraj Raghuraman. "Combining Skeletal Poses for 3D Human Model Generation using Multiple Kinects," In Proceedings of the 9th ACM Multimedia Systems Conference, pp. 40-51. 2018.
Acceptance Rate: 26%
H-5 Index (Median): 34 (65)

27. **Desai, Kevin**, Balakrishnan Prabhakaran, and Suraj Raghuraman. "Skeleton-based continuous extrinsic calibration of multiple RGB-D kinect cameras." In Proceedings of the 9th ACM Multimedia Systems Conference, pp. 250-257. 2018.
Acceptance Rate: 26%
H-5 Index (Median): 34 (65)

28. **Desai, Kevin**, Suraj Raghuraman, Rong Jin, and Balakrishnan Prabhakaran. "QoE studies on interactive 3D tele-immersion." In 2017 IEEE international symposium on multimedia (ISM), pp. 130-137. IEEE, 2017.
Acceptance Rate: 23.02%
H-5 Index (Median): 18 (26)

29. **Desai, Kevin**, Kanchan Bahirat, and Balakrishnan Prabhakaran. "Learning-based objective evaluation of 3D human open meshes." In 2017 IEEE International Conference on Multimedia and Expo (ICME), pp. 733-738. IEEE, 2017.
H-5 Index (Median): 35 (57)

30. (Invited) **Desai, Kevin**, Uriel Haile Hernndez Belmonte, Rong Jin, Balakrishnan Prabhakaran, Paul Diehl, Victor Ayala Ramirez, Vinu Johnson, and Murry Gans. "Experiences with multi-modal collaborative virtual laboratory (mmcvl)." In 2017 IEEE Third International Conference on Multimedia Big Data (BigMM), pp. 376-383. IEEE, 2017.
Acceptance Rate: 23.9%
H-5 Index (Median): 19 (29)

31. **Desai, Kevin**, Kanchan Bahirat, Sudhir Ramalingam, Balakrishnan Prabhakaran, Thiru Annaswamy, and Una E. Makris. "Augmented reality-based exergames for rehabilitation." In Proceedings of the 7th International Conference on Multimedia Systems, pp. 1-10. 2016.
Acceptance Rate: 28%
H-5 Index (Median): 34 (65)

32. **Desai, Kevin**, Kanchan Bahirat, Suraj Raghuraman, and Balakrishnan Prabhakaran. "Network adaptive textured mesh generation for collaborative 3d tele-immersion." In 2015 IEEE International Symposium on Multimedia (ISM), pp. 107-112. IEEE, 2015.
Acceptance Rate: 25.5%
H-5 Index (Median): 18 (26)

- All publications are peer-reviewed according to the corresponding conference / journal / workshop policies, unless explicitly mentioned as (Non-Reviewed) or (Invited) in front of the publication listing.
- H-5 Index (Median) obtained from Google Scholar - updated at time of publication.
- Acceptance rate is associated with Conferences and is obtained from the published proceedings online.
- Impact factor is associated with Journals and is obtained from their website - updated at time of publication.

PATENTS

- Annaswamy, T., Prabhakaran, B., Desai, K., & Khargonkar, N. VIRTUAL REMOTE TELEPHYSICAL EXAMINATION SYSTEM. 63/351,671.

TEACHING EXPERIENCE

Assistant Professor
Computer Science Department, The University of Texas at San Antonio

- CS 2713 - Computer Programming in C (formerly CS 1714 Computer Programming II) - Spring '25, Fall '24, Spring '24
- CS 5243 - Computer Vision - Fall '24, Fall '23
- CS 5233 - Artificial Intelligence - Fall '22
- CS 3793 - Artificial Intelligence - Fall '22

Assistant Professor of Instruction
Computer Science Department, The University of Texas at San Antonio

- CS 5243 - Computer Vision - Spring ’21
- CS 5233 - Artificial Intelligence - Fall ’22
- CS 4973 - Computer Vision - Spring ’21
- CS 4423 - Game Development - Fall ’21, Spring ’21, Fall ’20, Spring ’20
- CS 3793 - Artificial Intelligence - Summer ’22, Spr ’22, Summer ’21, Summer ’20, Fall ’19
- CS 2713 - Computer Programming in C (formerly CS 1714 Computer Programming II) - Spring ’22, Fall ’21, Summer ’21, Spring ’21, Fall ’20, Spring ’20, Fall ’19

Instructor
Computer Science Department, The University of Texas at Dallas

- CS 4332 - Introduction to Programming Video Games - Fall ’18
- CS 4141 - Digital Systems Lab - Fall ’15, Fall ’14, Summer ’14, Spring ’14, Fall ’13

Teaching Assistant
Computer Science Department, The University of Texas at Dallas

- CS 6360 - Database Design - Spring ’19
- CS 6331 - Multimedia Systems - Fall ’16, Fall ’15
- CS 6327 - Video Analytics - Spring ’18
- CS 4341 - Digital Logic & Comp Design - Summer ’14
- CS 3340 - Computer Architecture - Fall ’16, Fall ’14

STUDENT SUPERVISION

Current Graduate Students

- Ayda Eghbalian - PhD (LinkedIn)
  Expected Graduation: Fall 2027
- Sadia Mubashshira - PhD (LinkedIn)
  Expected Graduation: Spring 2028
- Md Mushfiqur Azam - PhD (LinkedIn)
  Expected Graduation: Spring 2028
- OFM Riaz Rahman Aranya - PhD (LinkedIn) (Webpage)
  Expected Graduation: Spring 2028
- Nazanin Amini - PhD (Joining Spring 2025)
  Expected Graduation: Fall 2029

Past Graduate Students

- Kebin Peng - PhD (LinkedIn) (Webpage)
  Graduated: Summer 2023
  Last Known Position: Assistant Professor in the Department of Computer Science at East Carolina University

- Omar Medjaouri - MS (LinkedIn)
  Graduated: Spring 2022
  Last Known Position: Research Engineer at Southwest Research Institute (SwRI)

Current Undergraduate Students

- Cassandra Gomez (LinkedIn)
  Expected Graduation: Fall 2025

Past Undergraduate Students

- Cristian Lopez (LinkedIn)
  Graduated: Fall 2024
- Joshua Silva (LinkedIn)
  Expected Graduation: Spring 2025
- Soren Watterson (LinkedIn)
  Expected Graduation: Spring 2025
- Jenelle Millison (LinkedIn)
  Graduated: Spring 2023
  Last Known Position: Data Scientist at Johns Hopkins University Applied Physics Lab
- Jeff Dong (LinkedIn)
  Graduated: Spring 2023
  Last Known Position: Software Developer at Paycom
- Ker Xiang Teh (LinkedIn)
  Graduated: Spring 2023
  Last Known Position: Application Security Engineer at HEB
- Hector Pineda (LinkedIn)
  Graduated: Spring 2023
  Last Known Position: Software Developer at HEB
- Ivy Vasquez Sandoval (LinkedIn)
  Graduated: Fall 2020
  Last Known Position: Robotics Software Engineer at Plus One Robotics

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PhD Dissertation Committees

- "Leveraging Latent Fields for Accurately Attributing Model Behavior", Ethan Payne, PhD Dissertation, Committee Member, Spring 2024.
- "Containerized Computer Vision Applications on ARM-Powered Edge Devices", Osamah Alqaisi, PhD Dissertation, Committee Member, Spring 2024.
- "Multimodal Feedback Techniques to Increase Accessibility of Immersive Virtual Reality", Rasel Mahmud, PhD Dissertation, Committee Member, Fall 2023.
- "Leveraging Explainability to Increase Efficiency and Transparency in Computer Vision", David Patrick, PhD Dissertation, Committee Member, Fall 2023.
- "Analyzing the Geometric Structure of Deep Learning Decision Boundaries", Michael Geyer, PhD Dissertation, Committee Member, Fall 2023.
- "Enhancing Depth Estimation in Adverse Lighting Scenarios for Autonomous Driving", Kebin Peng, PhD Dissertation, ***Committee Chair***, Summer 2023.

- "Towards Understanding the Impacts of Virtual Terrain on User Experience in VR", Samuel Ang, PhD Dissertation, Committee Member, Summer 2023.
- "Towards Automatic Cybersickness Detection, Early-Prediction, and Reductions for Virtual Reality Applications", Rifatul Islam, PhD Dissertation, Committee Member, Spring 2022.
- "Aquatic Virtual Reality: From Feasibility to Application", Raphael Costa, PhD Dissertation, Committee Member, Summer 2020.

MS/UG Thesis & Project Committees

- "Efficient Semantic Segmentation and Applications in Nuclear Fuels Fabrication", Chris Snyder, MS Project & Comprehensive Exam, Committee Member, Fall 2023.
- "Leveraging Quantum Computing in Convolutional Neural Networks", Guillermo "Bill" Gonzalez, MS Project & Comprehensive Exam, Committee Member, Fall 2023.
- "GeoAI For Urban Resilience: Strategic Optimization of Power Grids and Electric Vehicle Fleet Charger Networks", Ana Nunez, MS Thesis, Committee Member, Fall 2023.
- "3D Hand Pose Estimation Informed by the Human Kinematic Chain", Jenelle Millison, Undergraduate Honors Thesis, Committee Chair, Spring 2023.
- "Optimizing Electric Vehicle Charging Stations and training robots in City Scale Digital Twin", Nithish Reddy Gundla, MS Project, Committee Member, Spring 2023.
- "3D Digital Twin Representation of Building Indoors", Susheela Sri Akunuru, MS Thesis, Committee Member, Fall 2022.
- "AI Federated Learning for Face Recognition at the Edge", Sadia Afrin, MS Thesis, Committee Member, Summer 2022.
- "Attention-Based Audio Driven Facial Animation", Neda Zand, MS Thesis, Committee Member, Summer 2022.
- "HR-STAN: High-Resolution Spatio-Temporal Attention Network for 3D Human Motion Prediction", Omar Medjaouri, MS Project & Comprehensive Exam, Committee Chair, Spring 2022.

MS Comprehensive Exam Committees

- "Neural Network Architectures Strategies for their Efficient Design and Implementation", Eulises Franco, Master's Comprehensive Exam, Committee Chair, Spring 2024.
- "Transformer models in natural language processing", Clay Roberts, Master's Comprehensive Exam, Committee Member, Fall 2023.
- "Exploring the Application of Natural Language Processing Techniques in Developing Knowledge Bases", Sanjeeth Boddinagula, Master's Comprehensive Exam, Committee Member, Summer 2023.
- "Utilizing Various Datasets with Machine Learning to Aid in Heart Failure Diagnosis", Zain Momin, Master's Comprehensive Exam, Committee Member, Spring 2023.
- "Generative Pre-Trained Transformer", Zarina Khan, Master's Comprehensive Exam, Committee Chair, Spring 2023.
- "Personalization of Cybersickness Prediction Models", Umama Tasnim, Master's Comprehensive Exam, Committee Member, Spring 2023.
- "Chaos Theory and its Application to Image Encryption", Matthew Martinez, Master's Comprehensive Exam, Committee Member, Fall 2022.

- "3D Full-Body Expressive Human Pose Estimation", Somraj Dangi, Master's Comprehensive Exam, Committee Chair, Fall 2022.
- "A New Model of Age Estimation", Xi Tang, Master's Comprehensive Exam, Committee Member, Fall 2022.
- "A Review of Generative Models", Brendan Winn, Master's Comprehensive Exam, Committee Member, Fall 2022.
- "Evolving Two-Factor Authentication", Graciela Caballero, Master's Comprehensive Exam, Committee Member, Fall 2022.
- "AI in Modern Websites", Satyajeet Avinash Rankhamb, Master's Comprehensive Exam, Committee Member, Fall 2022.
- "Cloud Computing: Salesforce", Akshat Srivastava, Master's Comprehensive Exam, Committee Member, Fall 2022.
- "DevOps Tools - Prometheus, Kafka, AWS", Versha Khare, Master's Comprehensive Exam, Committee Member, Fall 2022.
- "Security in Intermittent Computing", Faisal Khurram, Master's Comprehensive Exam, Committee Member, Summer 2022.
- "Secure Federated Learning at the Edge", Vasumathy Sundararaj, Master's Comprehensive Exam, Committee Member, Spring 2022.
- "Docker and Containers", Yash Sokalla, Master's Comprehensive Exam, Committee Member, Spring 2022.
- "Deep Learning for Detecting Inappropriate Content in Text", Maheshwari Neelanolla, Master's Comprehensive Exam, Committee Chair, Fall 2021.
- "Single-View 3D Point Cloud Reconstruction", Jesna Jose, Master's Comprehensive Exam, Committee Chair, Fall 2021.
- "Cryptocurrency Trading using multivariate social sentiment and volume data analysis", Richard Maduka, Master's Comprehensive Exam, Committee Member, Fall 2021.
- "NeuroEvolution of Augmenting Topologies (NEAT)", Ivy Vasquez Sandoval, Undergraduate Independent Study Project, Fall 2020.
- "More on Augmented Reality (AR)", Pranali Mandaokar, Master's Comprehensive Exam, Committee Member, Spring 2020.

INSTITUTIONAL SERVICE

UTSA University Service

- Faculty Search Committee – Assistant Professor of Construction Science and Management with an AI focus - 2025
- Faculty Advisor, Association for Computing Machinery (ACM@UTSA), 2021 - Present
- Faculty Advisor, Google Student Developers Club, 2022 - Present
- ExploreSTEM@UTSA Presentation - Summer 2020
- Peer Mentor for Online Instructions - Summer 2020

UTSA Computer Science Department Service

- Course Coordinator
  CS 2713 - Computer Programming in C (formerly CS 1714 Computer Programming II)
  2020 - Present
  Duties – Coordinate the 3-6 different sections of the CS 2713 (old CS1714) course in

aspects such as designing the course structure, syllabus, textbook prep (zyBooks), assignments, projects, quizzes, exams, and Canvas/BB course.

- Student Success Committee, Tutor Hiring and Supervision, CS Jumpstart Program
  Member – 2024 - Present (Chair - Mauricio Gomez)
  Chair – 2021 - 2024
  Duties – Schedule, hire, and supervise tutors for undergraduate courses in the CS department, maintain and update HOW-TO documents for the CS students, collaborate with faculty and ACM to organize different events for student success such as resume review workshops, organize a week-long, intensive jumpstart program each semester, a week before classes begin, offering hands-on programming workshops designed to support transfer students and enhance course readiness.
- Department Faculty Advisory Committee (DFAC)
  Member – 2021 – 2024 (Chair - Sushil Prasad / Fred Martin)
  Duties – Represent the student success committee in a department faculty advisory committee to discuss and propose changes for the benefit of the CS department and the students.
- Curriculum Committee
  Member – 2020 - 2022 (Chair - Palden Lama)
  Duties – Work with the department in proposing any changes related to the CS undergraduate degree program, including changes to the course sequence / prereqs and adding/removing courses to keep the degree up to date with the industry needs.
- Communications and Outreach Committee
  Member – 2020 - 2022 (Chair - Greg White)
  Duties – Help represent the CS department at outreach activities such as UTSA Day.
- Lab Committee
  Member – 2020 - 2022 (Chair - Murtuza Jadliwala)
  Duties – Proposed updates to the CS department lab infrastructure, specifically for the CS Main Lab that is used by the CS students for tutoring.

PROFESSIONAL SERVICE

Conference / Workshop Organization

- Workshop, M-POWER Project, MATRIX at UTSA - "Introduction to Computer Vision for Medical Applications" - June 27, 2024
- Session Chair, IEEE International Conference on Multimedia Big Data, BigMM 2017
- Local Arrangements Co-Chair, IEEE International Conference on Healthcare Informatics (ICHI) 2015, Dallas, TX, October 2015
- Session Chair, IEEE International Symposium on Multimedia, ISM 2015

Conference Program Committee / Reviewer

- Association for the Advancement of Artificial Intelligence (AAAI) Conference on Artificial Intelligence - 2024
- CVF/IEEE International Conference on Computer Vision and Pattern Recognition (CVPR) - 2024
- European Conference on Computer Vision (ECCV) - 2024
- CVF/IEEE International Conference on Computer Vision (ICCV) - 2023
- ACM Multimedia, ACMMM - 2021, 2022, 2023, 2024

- IEEE International Symposium on Mixed and Augmented Reality (ISMAR) - 2020, 2022, 2023, 2024
- IEEE Conf on Virtual Reality and 3D User Interfaces (IEEE VR), 2022, 2023, 2024
- Virtual Reality Software and Technology (VRST) - 2022
- ACM Symposium on User Interface Software and Technology (UIST), ACM SIGCHI and SIGGRAPH - 2020

Journal Reviewer

- Transactions on Emerging Topics in Computing, IEEE Journal, September 2019 - Present
- Transactions on Multimedia, IEEE Journal, September 2015 - Present
- Springer Multimedia Systems Journal (MMSJ), August 2015 - Present
- Access, IEEE Journal, May 2020 - Present
- Computer Animation and Virtual Worlds, Wiley Journal, Feb 2021 - Present
- MDPI Journals (Electronics, Sensors, J-Imaging, Informatics) - October 2021 - 2024
- Immersive Learning Research Network, iLRN 2020, 2021, 2022

Proposal Panelist / Reviewer

- National Science Foundation (NSF) CRII Panel - 2024
- National Science Foundation (NSF) SCH-CV Panel - 2024
- National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) - 2021

Other Service

- Judge - UTSA ACM RowdyHacks - 2021, 2022
- Judge - Science and Engineering Research Fair and Symposium - Dec 2020
- Judge - Alamo Regional Science and Engineering Fair (ARSEF) - Feb 2020