Curriculum Vitae

Soheyla Amirian, Ph.D.

Director, AMIIE Laboratory
Assistant Professor
Seidenberg School of Computer Science and Information Systems
Pace University

E-mail	soh.amirian@gmail.com; samirian@pace.edu
Laboratory Homepage	https://amiielab.github.io/
Linked-in	https://www.linkedin.com/in/soheylaamirian
ResearchGate	https://www.researchgate.net/profile/Soheyla-Amirian
Mailing Address	15 Beekman Street, New York, NY, 10038

RESEARCH INTERESTS

Technical	Explainable, Interpretable, and Accountable AI, Machine Learning, and Generative AI
Application	Real World Problems

PROFESSIONAL SUMMARY

I am an active learner.

Applied AI and ML Research (8+ Years): Demonstrated proficiency in designing, implementing, and leading research studies in applied Artificial Intelligence (AI) and Machine Learning (ML).

Leadership & Project Management: Proven track record directing teams of students, researchers, and scientists in diverse projects, showcasing innovative AI-powered solutions. Successfully led teams in various projects, encompassing software development and network design.

Mentorship and Educational Leadership (22+ Years): Offering over two decades of expertise in providing mentorship and leadership to students while imparting knowledge in computer science.

Academic & Specialized Skills: Hold a Ph.D. in Computer Science from the University of Georgia, specializing in applying AI/ML to Image Analysis, image captioning, video captioning, and Computer Vision.

Research Publication Excellence (9+ Years): Extensive experience in publishing impactful scientific papers, reflecting a continuous commitment to advancing research in the field.

EDUCATION

Aug 2021	**Ph.D. in Computer Science**, University of Georgia, Athens, Georgia, USA *Advisor: Prof. Hamid R. Arabnia;* *Research area: Computer Vision, Deep Learning, Vision Language Modeling* *Thesis: "*An Integrated Approach for Video Captioning and Applications"
May 2025 - present	**Master of Business Admin (MBA) - Business**, Pace University, New York, USA
Mar 2013	**M.Sc. in Information Technology Engineering, Computer Networks**, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
Oct 2006	**B.Sc. in Computer Engineering- Software**, Azad University, Lahijan, Guilan, Iran

WORK EXPERIENCE

Sep 2024 – present	**Assistant Professor,** Seidenburg School of Computer Science & Information Systems, Pace University *Courses Taught: Artificial Intelligence (CS 627); Data Structures and Algorithms (CS 241); Research Seminar (CS 802)*
Oct 2022 – present	**Director,** Applied Machine Intelligence Initiative and Education (AMIIE) Laboratory ***Strategic Leadership**: Leading more than 4 teams, each comprising 4+ members including graduates, undergraduates, and*

elite researchers, in the successful execution of diverse projects.
***Data Handling & Analysis**: Integrating health datasets for researchers, clinicians, and surgeons, refining program features for enhanced functionality.*
***Educational Program Enhancement**: Enhancing educational programs through targeted support initiatives, ensuring continuous improvement.*
***Business Development**: Securing projects and applying for funds to ensure the lab's project success.*
***Advanced ML/DL Implementation**: Applying cutting-edge ML and DL techniques, including GPT-3, BERT, Word2VEC, and GAN, in crafting applications with predictive, projective, and suggestive capabilities. Implementing solutions for various projects.*
***Efficient Project Leadership**: Demonstrating proficiency in providing AI-powered models, ensuring efficient and successful project completion.*
***Team Excellence**: Assembling and mentoring a high-performing team of students and researchers tailored to project requirements. Team members progressed to elite projects.*
***Health App Developments**: Leading the development of a mobile application for fall detection, integrating data from images, text, sensors, and medical reports. The interactive app significantly improves patient-doctor collaboration.*
***Impactful Health Solution**: Implementing health applications,, offering real-time health insights and significantly enhancing patient care..*

Aug 2021 – Aug 2024 **Faculty Lecturer,** School of Computing, University of Georgia
Faculty Fellow, Institute for Artificial Intelligence
Graduate Students Academic Advisor, Fall 2023
***Academic Leadership:** Serve as a UGA Faculty Fellow at the Institute for Artificial Intelligence, contributing expertise to advance AI research initiatives.*
***Teaching Excellence:** Fulfill the role of Faculty Lecturer at the School of Computing, University of Georgia, delivering impactful lectures and shaping the next generation of computer science professionals.*
***Mentorship and Guidance:** Assume the responsibility of a Graduate Students Academic Advisor, providing valuable guidance and support to aspiring researchers in their academic pursuits.*
***Student Development:** Facilitate the academic and professional development of graduate students, ensuring they are well-equipped for success in their chosen fields.*
***Academic Excellence:** Contribute to maintaining the academic excellence of the School of Computing by actively participating in curriculum development and improvement initiatives.*
Discrete Mathematic – Intro Computing Program (Java) – Data Structures and Algorithms – Informatics and Data Analytics – Internship in CSCI – Directed Study – Faculty Mentored Research – Directed Study – Master's Project – Intern Comp Sci Busi Indus – …

2017 – 2021 **Instructor of Record, Lab instructor, and Graduate Teaching Assistant**
Computer *Science Department, University of Georgia*

2000 - 2016 **Faculty Lecturer and Course coordinator**
Computer Science and IT Departments, Kermanshah, Iran

MAJOR AWARDS

Grant

- **NIH/ National Institute on Aging (NIA),** "AI-powered Web Application to Analyze Knee Joint Space for Aging Population" funded, total $105,913.00, One year, 2024-2025
- **The Helene T. and Grant M. Wilson Center for Social Entrepreneurship,** Faculty Fellowship**,** funded total $5000, Pace University, NYC, NY, 2024-2025

Keynote Speaker

- "AI Fairness to Empower Equity in Healthcare: Addressing Bias in AI-Powered Medical Image Segmentation", the 2024 International Conference on Computational Science and Computational Intelligence (CSCI'24), Las Vegas, NV, USA, Dec 2024
- "Fair and Responsible AI in Medical Imaging Informatics", The Seidenberg Annual Research Day, NY, USA, Dec 2024
- "Generative Artificial Intelligence and Enhanced Analysis of Scientific Literature: Advanced Clinical Text Mining on PubMed", The GWU Biomedical Informatics Center, CTSI-CN, and Washington DC VA Joint Informatics Seminar Series, Sep 2024
- "Integrating Advanced AI Algorithms with Scientific Articles; Large Language Models (LLMs) and Beyond", the 2023 International Conference on Computational Science and Computational Intelligence (CSCI'23), Las Vegas, NV, USA, Dec 2023
- "AI Fairness in Medical Image Segmentation", Health Informatics Grand Rounds, University of Pittsburgh, USA, Nov 2023

Award

- The University of Georgia "**Student Career Success Influencer Award 2023**", Feb 2024
- **IEEE Atlanta Section Outstanding Educator Award,** The winner of the IEEE Atlanta Section Outstanding Educator Award for excellence in AI and computer science, Oct 2023
- **Outstanding Teaching Assistant (OTA) Award**, UGA, USA, Apr 2021
- **CSCI 2019 Outstanding Achievement Award,** the 2019 International Conference on Computational Science and Computational Intelligence, Las Vegas, NV, USA, Dec 2019, **CSCI 2019 Sponsored**

- Named a Finalist of the **2020 NCWIT (National Center for Women and Information Technology) Collegiate Award,** USA, Dec 2019
- **NVIDIA GPU** Grant, **NVIDIA,** received an NVIDIA GPU Grant to support compute-intensive research on deep learning-based image captioning, enabling GPU-backed training of large computer vision and language models, mixed-precision experimentation, and efficient scaling of advanced AI architectures, Feb 2019
- **Best Paper Award** for "Issues of borders and security challenges in sensor networks", Regional Computing Conference on Sustainable Development of Border Security, Azad University, Shirvan Branch, North Khorasan, Iran, Mar 2014

Scholarship

- **CCC Computing Futures Symposium,** CRA Scholarship, Washington D.C., USA, May 2025
- **Anita Borg Grace Hopper** (GHC 23) Scholarship, Virtual, USA, Sep 2023
- **ACM Richard TAPIA Conference** Scholarship, Washington D.C., USA, Sep 2022
- **CRA-WP Grad Cohort for Women** Scholarship, Virtual (because of COVID-19), USA, Apr 2021
- **ACM Richard TAPIA Conference** Scholarship, Virtual (because of COVID-19), USA, Sep 2020
- **Anita Borg Grace Hopper** (GHC 19) Scholarship, Orlando, FL, USA, Oct 2019
- **CRA-W Grad Cohort** Scholarship, San Francisco, CA, USA, Apr 2018
- **POOIA** (Professional Organization of Iranian-Americans) Student Scholarship, USA, Dec 2017

SELECTED PUBLICATIONS

Google Scholar profile: Please Click Here

1. KneeXNet-2.5D: A Clinically-Oriented and Explainable Deep Learning Framework for MRI-Based Knee Cartilage and Meniscus Segmentation", which was submitted to npj Health Systems on 18 September 2025 UTC, Submission ID 86b287b2-9e6c-4f08-8363-0564e6ba03c9, accepted in Jan 2026
2. Fengyi Gao, Nickolas Littlefield, Nicole Myers, Adolph J. Yates Jr., Kurt R. Weiss, Johannes F. Plate, Ahmad P. Tafti, **Soheyla Amirian**, "Explainable Contrastive Learning for KL Grading Classification in Knee Osteoarthritis," 2025 47th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Copenhagen, Denmark, 2025, pp. 1-7, doi: 10.1109/EMBC58623.2025.11252884.
3. Maimouna, Fengyi Gao, Nickolas Littlefield, Nicole Myers, Kasey, Zoe, Michael Kann, Ismaeel Siddiqui, Pavan, **Soheyla Amirian**, George, James, Adolph, Frank, Ahmad, , "Automated Knee Cartilage and Meniscus Segmentation in MRI Using Explainable 2.5D Deep Learning method", RSNA 2025
4. **Soheyla Amirian** et al., "State-of-the-Art in Responsible, Explainable, and Fair AI for Medical Image Analysis," in IEEE Access, vol. 13, pp. 58229-58263, 2025, doi: 10.1109/ACCESS.2025.3555543.
5. Afsaneh Shams, Elika Bozorgi, Nima Darbandi, **Soheyla Amirian**, Khaled Rasheed, "Evolutionary Computing Applications and Trends from 2010 to 2025: A Brief Review", AIR-RES 2025.
6. Behshid Behkamal, Amin Rezaei, Nickolas Littlefield, Samarth Bhardwaj, Leah Reid, Nicole Myers, **Soheyla Amirian**, Ahmad P. Tafti, "Explainable Feature Engineering in Health Data Science: Empirical Comparison of ChatGPT-4o and Classical Machine Learning Methods", has been Accepted at the 2025 IEEE/ACM Conference on Connected Health: Applications, Systems, and Engineering Technologies (CHASE), 2025.
7. Tejasvi Sanjay Kamble, Hongtao Wang, Nicole Myers, Nickolas Littlefield, Leah Reid, Cynthia S. McCarthy, Young Ji Lee, Hongfang Liu, Liron Pantanowitz, **Soheyla Amirian**, Hooman H. Rashidi, Ahmad P. Tafti, "Predicting Cancer Survival at Different Stages: Insights from Fair and Explainable Machine Learning Approaches", International Journal of Medical Informatics, IJMEDI, Elsevier, ISSN 1386-5056, Feb 3 2025.
8. **Soheyla Amirian** et al. Advancing psychosocial disability and psychosocial rehabilitation research through large language models and computational text mining. Cambridge Prisms: Global Mental Health. 2024;11:e123. doi:10.1017/gmh.2024.114
9. Nickolas Littlefield, **Soheyla Amirian**, Jacob Biehl, Edward G. Andrews, Michael Kann, Nicole Myers, Leah Reid, Adolph J. Yates Jr., Brian J. McGrory, Bambang Parmanto, Thorsten M. Seyler, Johannes F. Plate, Hooman H. Rashidi, Ahmad P. Tafti, Generative AI in Orthopedics: An Explainable Deep Few-Shot Image Augmentation Pipeline for Plain Knee Radiographs and Kellgren–Lawrence Grading, Journal of the American Medical Informatics Association, 2024
10. Gong M, Finger LE, Letter C, **Amirian S**, Parmanto B, OMalley M, Klatt BA, Tafti AP, Plate JF. Development and Validation of a Mobile Phone Application for Measuring Knee Range of Motion. The Journal of Knee Surgery. 2024 Aug 14.
11. Siddiqui IA, Littlefield N, Carlson LA, Gong M, Chhabra A, Menezes Z, Mastorakos G, Thakar S, Abedian M, Lohse I, Weiss KR, Plate JF, Moradi H, **Amirian, Soheyla**, Tafti AP. 2024, " Fair AI-powered orthopedic image segmentation: addressing bias and promoting equitable healthcare", Scientific Reports, 14(1), p.16105.
12. **Soheyla Amirian** et al., "Development and Validation of a Smartphone App for Automated Knee Range of Motion Measurement in a Clinical Setting", AMIA 2024 Informatics Summit.

13. **Soheyla Amirian** et al.,"HexAI-TJAtxt: A Textual Dataset to Advance Open Scientific Research in Total Joint Arthroplasty", Data in Brief, 2023, ISSN 2352-3409, doi.org/10.1016/j.dib.2023.109738.
14. Littlefield N, Plate JF, Weiss KR, Lohse I, Chhabra A, Siddiqui IA, Menezes Z, Mastorakos G, Moradi H, **Amirian, Soheyla**, Tafti AP. "Learning Unbiased Image Segmentation: A Case Study with Plain Knee Radiographs". 2023 IEEE EMBS International Conference on Biomedical and Health Informatics (BHI), pp. 1-5, 2023.
15. Nickolas Littlefield, Matthew Carlson, Luke A, Gong, **Soheyla Amirian**, Weiss Kurt Lohse, Ines, Ahmad P Tafti, "A Deep Few-Shot Meta-Learning Strategy for Autonomous Classification of Bone Metastasis in Radionuclide Bone Scans", CTOS 2023
16. **Amirian** et al., "Explainable AI in Orthopedics: Challenges, Opportunities, and Prospects", 2023 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE), IEEE, DOI: 10.1109/CSCE60160.2023.00230, pp. 1374-1380, 2024
17. Shams, Afsaneh, Becker, Drew, Becker, Kyle, **Amirian, Soheyla**, Rasheed, Khaled, "Evolving Efficient CNN Based Model fo Image Classification", 2023 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE), IEEE, DOI: 10.1109/CSCE60160.2023.00041, pp. 228-235, 2024.
18. Littlefield N, Plate JF, Weiss KR, Lohse I, Chhabra A, Siddiqui IA, Menezes Z, Mastorako G, Moradi H, **Amirian, Soheyla**, Tafti AP. "AI Fairness in Hip Bony Anatomy Segmentation: Analyzing and Mitigating Gender and Racial Bias in Plain Radiography Analysis". IEEE ICHI. 2023.
19. Littlefield, Nick, Moradi, Hamidreza, Kremers, Hilal Maradit, **Amirian, Soheyla**, Plate, Johannes F., and Tafti, Ahmad P., "Enforcing Explainable Deep Few-Shot Learning to Analyze Plain Knee Radiographs", in ICHI, 2023.
20. **Soheyla Amirian** et al., "Word Embedding Neural networks to Advance Knee Osteoartheritis Research", in Computational Science and Computational Intelligence; 2022 International Conference on IEEE CPS (IEEE XPLORE, Scopus), DOI Bookmark: 10.1109/CSCI58124.2022.00055, pp. 289-292, 2022.
21. **Soheyla Amirian** et al., "Generative Adversarial Network Applications in Creating a Meta-Universe", in Computational Science and Computational Intelligence; 2021 International Conference on IEEE CPS (IEEE XPLORE, Scopus), ISBN: 978-1-6654-5841-2, pp. 175-179, 2021.
22. **Soheyla Amirian** et al., "An Integrated Approach for Video Captioning and Applications", The 2021 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'21), IEEE, 2021.
23. **Soheyla Amirian** et al., "The Use of Video Captioning for Fostering Physical Activity," in Computational Science and Computational Intelligence; 2020 International Conference on IEEE CPS (IEEE XPLORE, Scopus), ISBN-13: 978-1-7281-7624-6, pp. 611-614, 2020.
24. **Soheyla Amirian** et al., "Automatic Image and Video Caption Generation with Deep Learning: A Concise Review and Algorithmic Overlap," in IEEE Access, vol. 8, pp. 218386-218400, 2020.
25. **Soheyla Amirian** et al., "Automatic Generation of Descriptive Titles for Video Clips Using Deep Learning," in Springer Nature - Research Book Series: Advances in Artificial Intelligence and Applied Cognitive Computing, Transactions on Computational Science and Computational Intelligence; Springer ID: 89066307 (Book ID: 495585_1_En), ISBN #: 978-3-030-70295-3, 2020, pp. 17–28.
26. Fowler, Jonathan, and **Amirian, Soheyla**, "Integrated Plant Growth and Disease Monitoring with IoT and Deep Learning Technology," in Springer Nature - Research Book Series: Transactions on Computational Science & Computational Intelligence; Series Title: Advances in Data Science & Information Engineering, Springer ID: 89066304 (Book ID: 495582_1_En), 2020, ISBN #: 978-3-030-71703-2, pp. 389-395.
27. Toutiaee, Mohammadhossein, **Amirian, Soheyla**, Miller, John A., Li, Sheng, "Stereotype-Free Classification of Fictitious Faces," in arXiv:2005.02157, 2020.
28. **Soheyla Amirian** et al., "Image Captioning with Generative Adversarial Network," in Computational Science and Computational Intelligence; "Artificial Intelligence" (CSCI-ISAI); 2019 International Conference on IEEE CPS (IEEE XPLORE, Scopus), 2019, ISBN -13: 978-1-7281-5584-5, pp. 272-275.
29. **Soheyla Amirian** et al., " A Short Review on Image Caption Generation with Deep Learning", The 23rd International Conference on Image Processing, Computer Vision and Pattern Recognition (IPCV'19), World Congress in Computer Science, Computer Engineering and Applied Computing (CSCE'19), IEEE, 2019, ISBN: 1-60132-506-1, pp. 10-18.
30. **Soheyla Amirian** et al., "Dissection of deep learning with applications in image recognition," in Computational Science and Computational Intelligence; "Artificial Intelligence" (CSCI-ISAI); 2018 International Conference on IEEE CPS (IEEE XPLORE, Scopus), 2018, ISBN-13: 978-1-7281-1360-9, pp. 1132–1138.

- **Book/ Editor**
  1. **AI Revolution: Research, Ethics and Society**, International Conference, AIR-RES 2025, Las Vegas, NV, USA, April 14–16, 2025, Proceedings, Part I, Conference proceedings, Editors: Hamid R. Arabnia, Leonidas Deligiannidis, Soheyla Amirian, Farid Ghareh Mohammadi, Farzan Shenavarmasouleh, eBook ISBN 978-3-032-12313-8, Print ISBN 978-3-032-12312-1, Part II, Conference proceedings, eBook ISBN 978-3-032-12930-7, Print ISBN 978-3-032-12929-1, Part III, Conference proceedings, eBook ISBN 978-3-032-13056-3, Print ISBN 978-3-032-13055-6

2. ICAI24: **Artificial Intelligence and Applications (ICAI'24)**, Hamid R. Arabnia, Leonidas Deligiannidis, Soheyla Amirian, Farzan Shenavarmasouleh, Farid Ghareh Mohammadi, David de la Fuente, Jose A. Olivas, eBook ISBN 978-3-031-86623-4, Print ISBN 978-3-031-86622-7
3. HIMS24-BIOENG24: **Health Informatics & Medical Systems (HIMS'24) and Biomedical Engineering** (BIOENG'24), Abeer Alsadoon, Farzan Shenavarmasouleh, Soheyla Amirian, Farid Ghareh Mohammadi, Hamid R. Arabnia, Leonidas Deligiannidis, Health Informatics and Medical Systems and Biomedical Engineering, 10th International Conference, HIMS 2024, and 10th International Conference, BIOENG 2024, Held as Part of the World Congress in Computer Science, Computer Engineering and Applied Computing, CSCE 2024, Las Vegas, NV, USA, July 22–25, 2024, Revised Selected Papers, eBook ISBN 978-3-031-85908-3, Print ISBN 978-3-031-85907-6
4. ICOMP24-ESCS24: **Internet Computing & IoT** (ICOMP'24) and Embedded Systems, Cyber-physical Systems, & Applications (ESCS'24), Hamid R. Arabnia, Leonidas Deligiannidis, Soheyla Amirian, Farid Ghareh Mohammadi, Farzan Shenavarmasouleh, eBook ISBN 978-3-031-85923-6, Print ISBN 978-3-031-85922-9
5. FCS24-FECS24: **Foundations of Computer Science (FCS'24) and Frontiers in Education**: Computer Science & Computer Engineering (FECS'24), Hamid R. Arabnia, Leonidas Deligiannidis, Soheyla Amirian, Farid Ghareh Mohammadi, Farzan Shenavarmasouleh, Foundations of Computer Science and Frontiers in Education: Computer Science and Computer Engineering, 20th International Conference, FCS 2024, and 20th International Conference, FECS 2024, Held as Part of the World Congress in Computer Science, Computer Engineering and Applied Computing, CSCE 2024, Las Vegas, NV, USA, July 22–25, 2024, Revised Selected Papers, eBook ISBN 978-3-031-85930-4, Print ISBN 978-3-031-85929-8
6. IPCV24-IKE24: **Image Processing, Computer Vision, & Pattern Recognition (IPCV'24) and Information & Knowledge Engineering (IKE'24)**, Leonidas Deligiannidis, Farid Ghareh Mohammadi, Farzan Shenavarmasouleh, Soheyla Amirian, Hamid R. Arabnia
7. **Computational Science and Computational Intelligence**, Hamid R. Arabnia, Leonidas Deligiannidis, Farid Ghareh Mohammadi, Soheyla Amirian, Farzan Shenavarmasouleh, eBook ISBN 978-3-031-90341-0, Print ISBN 978-3-031-90340-3 (Part II), (Part IX eBook ISBN 978-3-031-94943-2 Print ISBN 978-3-031-94942-5), (Part X eBook ISBN 978-3-031-94956-2 Print ISBN 978-3-031-94955-5), (Part XI), (Part VI), (Part VIII),

HONORS, VOLUNTEER EXPERIENCES

Honors

- **Faculty Mentor**, Mentoring colleague faculty members in teaching, development, and campus integration, Pace Universit, Dec 2025 to present
- Nominated for **the 2024 President's Award for Outstanding Contribution**, Pace University
- Women in Tech club mentor at Seidenberg, since March 2025
- **Honored to be Recognized as a Student Career Success Influencer,** the Class of 2024, Uiversity of Georgia, February 2025
- **News**
  - Deep Dive, Smart Medicine, March 19,2025
  - Pace Magazine, From Professionals to Profs, January 15, 2025
  - The tenth newsletter of the Penn Artificial Intelligence and Technology Collaboratory for Healthy Aging (PennAITech), Dec 2024
  - Pace's Newest AI Expert, Sep 2024
- **Teaching**
  - Nominated for a Franklin College **Teaching Award**, the University of Georgia, 2022, and 2023
  - **Teaching Recognition: Thank-a-Teacher Program, Center for Teaching and Learning, University of Georgia**; reported positive teaching impact.
    - Student comment: "You have a remarkable talent for making even the most challenging topics seem exciting and …", Spring 2023
    - Student comment: "Thank you so much for being such a wonderful professor and person! …", Fall 2022
    - Student comment: "…You made Discrete math my favorite class of the semester and of my college years so far…", Spring 2022
- Student comment: "Thank you for an excellent introduction to Computer Science. I was quite worried going into this class, but you made it manageable and did a fantastic job explaining the concepts…", Fall 2021
- **Poster**
  - "Booststrapping Multi-Modal Sentiment-Vector Spaces", SARD, Pace University, Dec 2025
  - "Fair and Explainable AI for the Automatic Diagnosis of Knee Osteoarthritis in Aging Population", CCC Computing Futures, CRA, Washington DC, May 14-16, 2025
  - "Fair and Explainable Multi-Modal AI for the Automatic Diagnosis of Knee Osteoarthritis", Research day, Pace University, May 8, 2025
  - "Advancements in AI for Breast Cancer Diagnosis: A 2024–2025 Systematic Review Update", AIR-RES Conference, Las Vegas, NV, April 14-16, 2025
  - "Fair and Explainable AI for the Automate Diagnosis of Knee Osteoarthrities", a2 National Symposium, Boston, USA, April 3-4, 2025
  - "Advancing Psychosocial Disability and Psychosocial Rehabilitation Research through Large Language Models and Computational Text Mining", AI Research day, University of Georgia, Athens, GA, USA, April 22, 2024, **Awarded 2nd Place**

- "Enhancing Patient Safety: A smartphone-Based Fall Detection Application", AI Research day, University of Georgia, Athens, GA, USA, April 22, 2024
- "Segmentation of Knee Cartilage in MRIs using Deep Learning: Building a Fully-annotated Imaging Dataset", AI Research day, University of Georgia, Athens, GA, USA, April 22, 2024
- "A Survey of Machine Learning: How Implementing the CIFAR-10 Dataset Prepares Young Computer Scientists for Success", AI Research day, University of Georgia, Athens, GA, USA, April 22, 2024
- "A Textual Dataset and Computational Text Mining for Open Scientific Research ob Chronic Pain Management", The annual research day event, School Of Computing, University of Georgia, Athens, GA, USA, Nov 17, 2023, **Awarded 1st Place**
- "Fall Detection using Smart Phone's Accelerometer and Gyroscope Sensor Values", The annual research day event, School Of Computing, University of Georgia, Athens, GA, USA, Nov 17, 2023, **Awarded 2nd Place**
- "Segmentation of Knee Cartilage in MRIs using Deep Learning: Building a Fully-annotated imaging Dataset", The annual research day event, School Of Computing, University of Georgia, Athens, GA, USA, Nov 17, 2023
- "Video Captioning and Applications", CRA-WP Grad Cohort for Women, Virtual, USA, Apr 2021
- "Stereotype Free Classification in Adversarial Networks", The 2nd Advancing Informatics in Government and Industry event, Georgia Center, University of Georgia, Athens, GA, USA, Nov 22, 2019, **Awarded**
- "Fairness Evaluation in Generative Networks", The annual research day event, Department Of Computer Science, Memorial Hall, University of Georgia, Athens, GA, USA, Oct 25, 2019
- "Video Caption Generation with Deep Learning", First Annual Computing@SEC, The University of Alabama, Sep 2019
- "Machine Learning for Solar Radiation Prediction", The annual research day event, Department Of Computer Science, Georgia Center, University of Georgia, Athens, GA, USA, Apr 13, 2018

- **Paper Presentation**
  - IEEE EMBC 2025, "Explainable Contrastive Learning for KL Grading Classification in Knee Osteoarthritis", Copenhagen, Denmark, Juy 14-17, 2025
  - ICHI 2023, "AI Fairness in Hip Bony Anatomy Segmentation", Huston, Texas, USA, June 2023
  - "The Use of Video Captioning for Fostering Physical Activity", International Symposium on Artificial Intelligence (CSCI-ISAI), USA, Dec 2020**,**
  - "Automatic Generation of Descriptive Titles for Video Clips Using Deep Learning", The 2020 World Congress in Computer Science, Computing Engineering and Applied Computing (CSCE'20), USA, July 28, 2020 (virtual, because of COVID-19 situation)
  - "Image Captioning with Generative Adversarial Network", International Symposium on Artificial Intelligence (CSCI-ISAI), USA, Dec 2019
  - " A Short Review on Image Caption Generation with Deep Learning", International Conference on Image Processing, Computer Vision, & Pattern Recognition (IPCV'19), Las Vegas, NV, USA, Jul 2019
  - "Dissection of deep learning with applications in image recognition", 5th Annual Conf. on Computational Science & Computational Intelligence (CSCI'18), Las Vegas, NV, USA, Dec 2018
- **Sponsored and Honors**
  - **GHC2025, Grace Hopper Celebration 2025 (GHC 25),** Chicago, illinois, November 4-7, 2025
  - **The 2025 Wilson Center Summer Internship Showcase,** invited by Helene and Grant Wilson Center for Social Entrepreneurship, October 14, 2025, New York City, NY
  - **NYSE Wired (MOE) Series**, invited by the NYSE, Brian J Baumann, March 5, 2025, New York City, NY
  - **Google Publc Sector, GenAI Live and Labs,** February 27, 2025, New York City, NY
  - **Microsoft AI Tour,** Javits Convention Center, January 30, 2025, New York City, NY
  - **Empire State of AI: An Evening with Microsoft .NET, and the Global AI Community,** January 29, 2025, Microsoft, New York City, NY
  - **Women in AI NYC Chapter, in partnership with Meta, as part of the Road to the Paris AI Action Summit,** January 22, 2025, Meta Finely, New York City, NY
  - **NYSE Wired AI**, invited by the NYSE, Brian J Baumann, August and October 24, 2024, NewYork City, NY
  - **GHC Faculty Scholarship, Grace Hopper Celebration 2023 (GHC 23) virtually,** September 26-29, 2023
  - **CRA Level-up Workshop,** Sep 2023, Atlanta, GA
  - **CSCE 2023,** The World Congress in Computer Science, Computer Engineering and Applied Computing (CSCE'23)**, CSCE 2022,** The 18th International Conference on Frontiers in Education: Computer Science and Computer Engineering (FECS)**, CSCE 2019,** The 23rd International Conference on Image Processing, Computer Vision and Pattern Recognition (IPCV'19)**, Sponsored**
  - **The 11th Annual Faculty Women of Color in the Academy National Conference**, April 2023, Arlington, Va, Sponsored by the Provost Office and School of Computing at UGA
  - **CSCI 2019, 2021, and 2022,** Computational Science and Computational Intelligence; "Artificial Intelligence" (CSCI-ISAI)**, CSCI 2018,** 5th Annual Conf. on Computational Science & Computational Intelligence (CSCI'18), **Sponsored**
  - **Broadening Participation in Computing (BPC) Workshop,** Aug 2022, Denver, Colorado
- **Travel Grant**
  - International Symposium on Artificial Intelligence (CSCI-ISAI), Dec 2019
  - International Conference on Image Processing, Computer Vision, & Pattern Recognition (IPCV'19), Aug 2019
  - Computational Science & Computational Intelligence (CSCI'18), Dec 13-15, 2018

- **Ranked**
  - **Number Four** in the entrance test for B.Sc. Degree, Computer Software Engineering, Iran (2014)
  - **Number One** in the entrance test for H.Dip., Computer Software, Iran (1998)

Volunteer Experiences

- **Judge**
  - Data Science Club, Hack-a-Thon with IBM, Pace University, NYC, Dec 2025
  - Seidenberg Annual Research Day (SARD), Pace University, New York City, NY, Dec 2024 and 2025
  - Sunflower Hackathon, Women in Tech Club, Pace University, April 11, 2025 (Women in Tech club won the OUTSTANDING PROGRAM OF THE YEAR award from the Center for Student Engagement for the WIT Sunflower Hack! April 2025)
  - GJSHS 2023 Judge, the 2023 Georgia Junior Science & Humanities Symposium, Feb 27, 2023
  - Judge – Poster sessions, Tapia 2022, Washington D.C., USA, Sep 2022
  - The Georgia Science and Engineering Fair (GSEF) is dedicated to encouraging all Georgia's teachers and school districts to incorporate active science and engineering research into their classrooms in order to help students, March 31 - April 2, 2021; April 1, 2022
  - **Special Award Judging for the 2021 Georgia Science and Engineering Fair-** US Agency for International Development Science Champion Award, March 30 - April 9, 2021
- **Pace Peer Class Observer,** Spring and Fall 2025
- **PaceBound 2 NYC**, Seidenberg School, Pace University, March 2 and April 6, 2025, New York City, NY
- **GSEF**, the 76th GSEF Award Ceremony presenting the **IEEE Atlanta Section Awards**, UGA, April 2024
- **Scholarship Reviewer**
  - **Tapia 2024 Conference, Scholarship Application Reviewer,** March 2024
  - **2023 CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference (Tapia 2023)**, in the role "Birds of a Feather submission Reviewer, Posters Reviewer, Scholarship Applications Reviewer, Feb 2023
  - **2022 CMD-IT/ACM Tapia Conference**, May 2022
  - **2021 CMD-IT/ACM Tapia Conference**, May 2021

PROFESSIONAL ACTIVITIES & OPERATIONAL SERVICES

- **Steering Committee Co-Chair,** International Conference on Applied Computing: Building Theory, Innovation, and Real-World Impact (CAC 2026), Las Vegas, NV, USA, April 13-15, 2026
- Conference attendance: The Human Future in the Age of AI, NYU, New York, Feb 2026
- **AdHoc Scholarly Research Release Time Review Committee,** Pace University, Oct 2025 to present
- **Conference Co-Chair (Program and Steering Committee),** The 2025 International Conference on Large Language Models (LLMs), Las Vegas, NV, USA, Dec 3-5, 2025
- **Steering Committee Co-Chair,** International Conference on the AI Revolution: Research, Ethics, and Society (AIR-RES 2025), Las Vegas, NV, USA, April 14-16, 2025, and AIR-RES 2026, April 13-15, 2026
- **Attending the NVIDIA GTC 2025,** San Jose, CA, March 18, 2025, and **NVIDIA GTC 2026 ,**March 16-19, 2026 Virtual
- **Professional Membership**
  - Institute of Electrical and Electronics Engineers (IEEE) Member from 2023 to 2025
  - American Medical Informatics Association (AMIA) Member 2023-2024
- **REF-AI Workshop organizer,** IEEE/ACM CHASE 2025, Manhattan, New York City, USA, June 24-26, 2025
- Conference attendance: the 6th Annual Pace Online Conference, Jan 16, 2025
- **Course Coordinator, Mathematical Structures for Computer Science, CS 113,** Pace University, NY, Fall 2024 – Spring 2025
- **Pace of Fintech: Accelerating Innovation Conference participation,** Pace University, NY, Sep 25, 2024
- **Organizer of AI Insight Webinar Series,** featuring invited industry speakers and engaging students, researchers, and industry professionals in applied AI and accelerated computing discussions, Sep 2024 - Present
- **Advisory Board,** HexAI Research Laboratory, University of Pittsburg, Aug 2024 – Jan 2025
- **Member:**
  - **New York Faculty Council member,** Pace University, Nov 2024 – present
  - **Curriculum Committee member**, Seidenberg School of Computer Science and Information Systems, Pace University, Oct 2024 – present
  - **International Program Committee member**, ISVC'24 (19th International Symposium on Visual Computing), Oct 2024
  - **Steering Committee, and Speaker,** The 2nd Summer School on AI-Powered Medical Imaging Informatics; Object Detection and Localization in Medical Images, 2024 Summer School for High School Students, University of Pittsburgh, organized by the Computational Pathology & AI Center of Excellence (CPACE) within the School of

Medicine, plus the School of Health and Rehabilitation Sciences, and IEEE Computer Society in Pittsburgh, June 24-28, 2024
- **Organizing Committee member**, AI Research Day: AI Transforming, University of Georgia, April 22nd , 2024
- **Program Review &Assessmt./Accreditation** (ABET Committee member), and **Outreach & Inclusion committee member**, University of Georgia, 2022 - 2024
- **University Council member**, University of Georgia, from July 2024
- **IEEE ICHI Program Committee member**, ICHI 2024, Orlando, FL, USA, June 2024
- **International Program Committee member**, ISVC'23 (18th International Symposium on Visual Computing), Oct 2023
- **IEEE Women in Engineering member,** the World's Largest Technical Professional Organization, Feb 2023-present
- **Search Committee member for hiring four faculty lecturers**, School of Computing, the University of Georgia, Sep 2022 – May 2023
- **ACM Professional member**, Association for Computing Machinery, Oct 2022- Sep 2023
- **Technical Program Committee member**, Advanced Machine Learning and Applications: Federated Learning and Meta-Learning (AML-IoT FLAME 2021), ICMLA, 20th IEEE International Conference on Machine Learning and Applications, June 2021

- **Safe AI Lead,** Pitt MOL Lab, Musculoskeletal Oncology Laboratory, UPMC, Oct 2023 – Jan 2025
- **Organizer of Women in Computing (WIC) Webinar Series,** Sep 2023 - 2024
- **Steering Committee Co-Chair**, The 2023 International Conference on Computational Science and Computational Intelligence (CSCI'23), USA, Dec 2023
- **Research Track Co-Chair of Computer Vision and AI,** The 2023 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'23), USA, July 2023
- **Women in Computing of Atlanta Chair,** April 2023- 2024
- **Extramural Collaborator,** HexAI Research Laboratory, University of Pittsburg, Aug 2022 – Aug 2024
- **Conference Session Chair**
  - The International Conference on Computational Science and Computational Intelligence (CSCI'25), Online, USA, Dec 2025
  - EMBC 2025, The Engineering in Medicine and Biology Conference, "Image classification models, Super resolution', Copenhagen, Denmark, Juy 14-17, 2025
  - The International Conference on Computational Science and Computational Intelligence (CSCI'20, CSCI'21, CSCI'22, CSCI'23), USA, Dec 2020 to 2023
  - The World Conference in Computer Science, Computer Engineering and Applied Computing (CSCE'21, CSCE'22, CSCE'23), USA, Jul 2021, 2022, 2023
  - International Symposium on Artificial Intelligence (CSCI-ISAI), USA, Dec 2019
  - International Conference on Image Processing, Computer Vision, & Pattern Recognition (IPCV'19), Las Vegas, NV, USA, Jul 2019
- **Book/ Book Chapter Reviewer/ Editor**
  - **Reviewer**: Data Structures and Algorithms in Java: A Project-Based Approach by Dan Myers, Cambridge University Press, Aug 2023
  - **Associate Editor**: CSCE 2023
- **Paper Reviewer/ Referee**
  - Springer Nature, 2025
  - Journal of Healthcare Informatics Research, 2023
  - ISVC 2023
  - AMIA Annual Symposium, 2023
  - Expert Witness (Controversial): Provided expert opinion to Springer and other publishers in cases of alleged plagiarism, demonstrating proficiency in navigating controversial topics and presenting well-reasoned arguments.
  - ICHI 2023 the 11th IEEE International Conference on Healthcare Informatics
  - IEEE 2021 International Conference on Machine Learning and Applications
  - The Second International Workshop on Bringing Semantic Knowledge into Vision and Text Understanding- IJCAI (Jun 2020 - present)
  - IEEE Access (Jun 2019 - present)
  - The Journal of Supercomputing, Springer (Mar 2019 - present)
- **Mentorship**
  - Serving as the Committee member of Graduate student, Harsh Himanshu Khilawala, at Pace University, Spring 2025
  - RAI for Ukraine, NYU - Ukrainian Catholic University– Pittsburg University:
    - Mentee: Vladyslav Protsenko (Graduate Student), Yaroslav Klym (Undergraduate Student), and Danylo Reznyk (Undergraduate Student), "Fair and Explainable Multi-Modal AI for Automatic Knee Osteoarthritis Diagnosis from X-ray/MRI and Metadata", RAI for Ukraine, NYU - Ukrainian Catholic University– Pittsburg University – Pace University, 2024 - 2025
  - At the University of Georgia:
    - Mentee: Mary Margaret Gleason (Undergraduate Student), "Machine Learning and How Prepare a Student to Success", 2024
    - Mentee: James Lawrence Rivera (Undergraduate Student), "Machine Learning", 2024

- Mentee: Rohan Swapneel Intipalli, Manoj Tumkur Shivashankar, Lakshmi Megana Bojja, (Graduate Students), "Mobile Application", 2023 - 2024
- Mentee: Dias Mashikov (Undergraduate Student), "DL and Web Application", 2023
- Mentee: Bryce N. Wellman (Undergraduate Student), "Machine Learning", 2023
- Mentee: Ashutosh Kekre, Boby John Loganathan , Vaishnavi Ganjikunta, Venkata Kandula (Graduate Students), "Text Mining", 2023 - 2024
- Mentee: Pavan Bodanki (Graduate Student), "Deep Leaning on Medical Images", 2023 - 2024
- Mentee: Aditya Patel, Nikhita Mallapa Biradar, Vedraj Sachin Chavan (Graduate Students), Dp Maryan Dehipitiarachchi (Undergraduate Student), "Deep Leaning on Medical Images", 2023 - 2024
- Mentee: Catherine Kimbrell Goldman (Undergraduate Student), "AI, and its applications", 2023
- Mentee: Sean Nicolas Payne (Undergraduate Student), "AI, and its applications", 2023
- Mentee: Afsaneh Shams (PhD Student), Computer Science, "Evolutionary Neural Networks to Classify Images", (2022-2025)
- Mentee: Robin Grazulis (Undergraduate Student), Terry College of Business, UGA, Chapter Leader, Harm Reduction Chair, "Ethics in AI world", 2023
- Mentee: Jacob Glover (Undergraduate Student), Computer Science, "Machine learning Applications using Python libraries and statistical software.", 2022
- Mentee: Christopher Rountree Hunter (Undergraduate Student), Computer Science, "Learning principles and application of machine learning to be applied to real world data sets and models", 2022

o More than 30 students, 2000 - 2016

INVITED TALKS & GUEST LECTURE

Invited Talks

- "AI in Computer Science Education: Opportunities & Challenges", Seidenberg School, Pace University, April 7, 2025
- "AI in Halthcare", **Icahn School of Medicine at Mount Sinai**, Bado Lab, Tisch Cancer Institute, NY, USA, January 2025
- **Lightning Talk:** "AI Transforming", AI Research day, UGA, USA, April 2024
- **Lightning Talk:** "AI in Health", AI and Data Science Across Disciplines Symposium, UGA, USA, Nov 2023
- **Invited Panelist:**
  - "The AI Revolution: How AI is Redefining our Daily Lives", the 28th annual Edward J. Mortola Legacy Society, Pace University, NYC, NY, USA, Oct 2024
  - "Code switching vs authentic self: Are you keeping it real?", IEEE Women in Engineering 2024
  - The 3rd Annual Deep Learning Workshop, the Office of Statistical Consulting and Training Marquette University, Milwaukee, WI, USA, Mar 2023
  - Graduate Faculty Panel, International Student Orientation, University of Georgia, Athens, Georgia, USA, Aug 2022
  - Data4Good and Girls Who Code (Women in Tech), University of Georgia, Athens, Georgia, USA, Oct 2021
  - Panel discussion of challenges of living as an international in a foreign country, a different language and a different educational environment and culture in the Computer Science Students Orientation, University of Georgia, Aug 12, 2019
  - Panel discussion of challenges of living as an international in a foreign country, a different language and a different educational environment and culture in the Computer Science Students Orientation, University of Georgia, Aug 08, 2018
  - Panel discussion of challenges of living as an international in a foreign country, a different language and a different educational environment and culture in the International Graduate Student Orientation, University of Georgia, Aug 01, 2018

- "A Hybrid Teaching Approach for STEM Education", The 18th International Conference on Frontiers in Education: Computer Science and Computer Engineering (FECS), CSCE'2022, Las Vegas, Nevada, USA, Jul 2022
- **Invited Guest Presenter:**
  - "Opportunities and Challenges with Video Captioning", in Computational Science and Computational Intelligence (CSCI'20); "Artificial Intelligence" (CSCI-ISAI); International Conference on IEEE CPS (IEEE XPLORE, Scopus), Las Vegas, NV, USA, Dec 17, 2020
  - 2020 UGA TA Orientation (with 650+ students), Aug 2020
  - International TA Orientation: Key teaching assistant policies for international TAs and provide resources related to successful teaching and learning practices, University of Georgia, Aug 7 & 13, 2019
  - Encouraging students, especially girls to study at the Computer Science, County High School, Athens, GA, USA, April 2019

Guest Lecture

- "Graphs Applications", the University of Pittsburgh, USA, Dec 2022
- GRSC, Computer Science Department, Athens, GA, USA, Sep 11, 2019
- An Introduction of Robotics, Computer Science Department, Middle School Students, Athens, GA, USA, Jun 5, 2019)
- An Introduction of Robotics, Computer Graphics class, Undergraduate and Graduate level, Computer

Science Department, University of Georgia, Aug 2017

CERTIFICATIONS, ADDITIONAL SKILLS, & ACTIVITIES

Additional Education & Certificates

- Becoming a Product Manager: A Complete Guide (2022, Linked-in Learning)
- Technical Product Management (2022, Linked-in Learning)
- NLP with Python for Machine Learning Essential Training (2019, Lynda.com)
- Neural Networks and Convolutional Neural Networks Essential Training (2018, Lynda.com)
- Python (2015, Michigan University)
- Cloud Computing (2014)
- Microsoft Service Providers Manager (2008)
- Network Security General Technician, Windows–NT manager (2007)
- Business Skills, Setting up the network structure for a department (2006)
- Management, Microsoft Excel (2004)
- Producing applications for two organizations (2001)

Technical Skills

Specialize in **Image Processing**, **Deep Learning**, **Image and Video Captioning**, Machine Learning, Computer Graphics, Instructional Technology, Networks, Cyber Security, and Computer Networks Administration. Productive in both team-based and self-managed projects; dedicated to maintaining up-to-date knowledge and IT skills. Currently, investigating new ways of utilizing Deep Learning methodologies. Proficient in tools/equipment/software such as different Programming Languages; SQL Server; 3DMax; Hadoop, Packet tracer, OpNet as Network Application Software.