

Soheyla Amirian

CONTACT INFORMATION

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EDUCATION

- Aug 2021 **Ph.D. in Computer Science**, University of Georgia, USA
Advisor: Prof. Hamid R. Arabnia;
Research area: Computer Vision, Deep Learning, Image/video Captioning
- Mar 2013 **M.Sc. in Information Technology Engineering, Computer Networks**, Amirkabir University of Technology (Tehran Polytechnic), Iran
- Oct 2006 **B.Sc. in Computer Engineering- Software**, Azad Univeristy of Lahijan, Lahijan, Iran

PROFESSIONAL SUMMARY

- A passionate, life-long learner and well-rounded in **Computer Vision, Deep Learning, Image Captioning, Video Captioning**, Image Processing, Machine Learning, Fairness in deep learning models, Computer Graphics, Computer Networks, and Instructional Technology. And highly interested in novel applications of image/video captioning.
- Effective scientific communicator and teacher, making complex scientific concepts easily understandable to a wide audience, thereby gaining their trust, confidence, and respect.
- Self-motivated, detailed-oriented, ambitious individual, with technical and analytical skills and easy integration into a team by building collaborations to use our knowledge in real life applications such as AI.

MAJOR AWARDS

- Apr 2021 **Outstanding Teaching Assistant (OTA) Award**, UGA, USA
- Apr 2021 **CRA-WP Grad Cohort for Women** Scholarship, Virtual (because of COVID-19), USA
- Sep 2020 **ACM Richard TAPIA Conference** Scholarship, Virtual (because of COVID-19), USA
- Dec 09, 2019 Named a Finalist of the **2020 NCWIT (National Center for Women and Information Technology) Collegiate Award**, USA
- Dec 06, 2019 **CSCI 2019 Outstanding Achievement Award**, The 2019 International Conference on Computational Science and Computational Intelligence, Las Vegas, NV, USA
CSCI 2019 Sponsored
- Oct 01, 2019 **Anita Borg Grace Hopper (GHC 19) Scholarship**, Orlando, FL, USA
- Feb 2019 **NVIDIA GPU Grant**
- Apr 2018 **CRA-W Grad Cohort** Scholarship, San Francisco, CA, USA
- Dec 03, 2017 **POOIA (Professional Organization of Iranian-Americans) Student Scholarship**, USA
- 2014 **Best Paper Award** for “Issues of borders and security challenges in sensor networks”, Regional Computing Conference on Sustainable Development of Border Security, Islamic Azad University, Shirvan Branch, North Khorasan, Iran

RECENT PUBLICATIONS

1. **Amirian, Soheyla**, Thiab R. Taha, Khaled Rasheed, and Hamid R. Arabnia, “An Integrated Approach for Video Captioning and Applications”, The 2021 World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'21), IEEE, 2021.

2. **Amirian, Soheyla**, Abolfazl Farahani, Khaled Rasheed, Hamid R. Arabnia, and Thiab R. Taha, "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.
3. **Amirian, Soheyla**, Khaled Rasheed, Thiab R. Taha, and Hamid R. Arabnia, "Automatic Image and Video Caption Generation with Deep Learning: A Concise Review and Algorithmic Overlap," in IEEE Access, vol. 8, pp. 218386-218400, 2020.
4. **Amirian, Soheyla**, Khaled Rasheed, Thiab R. Taha, and Hamid R. Arabnia, "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.
5. Fowler, Jonathan, **Soheyla Amirian**, "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.
6. Mohammadhossein Toutiaee, **Soheyla Amirian**, John A. Miller, Sheng Li, "Stereotype-Free Classification of Fictitious Faces," in arXiv:2005.02157, 2020.
7. **Amirian, Soheyla**, Khaled Rasheed, Thiab R. Taha, and Hamid R. Arabnia, "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.
8. **Amirian, Soheyla**, Khaled Rasheed, Thiab R. Taha, and Hamid R. Arabnia, "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.
9. **Amirian, Soheyla**, Zengyan Wang, Thiab R. Taha, and Hamid R. Arabnia, "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.

EMPLOYMENT HISTORY

- Aug 2021 – present **Lecturer**
 Computer Science Department, University of Georgia
CSCI 2610 Discrete Mathematic – Fall 2021, Spring 2022
CSCI 1301 Intro Computing Program (Java) – Spring 2022, Summer 2022
CSCI 2725 Data Structures for data science – Spring 2022
CSCI 1360 Informatics and Data Analytics – Summer 2022
- 2017 – 2021 **Instructor of Record, Lab instructor, and Graduate Teaching Assistant**
 Computer Science Department, University of Georgia
Instructor of Record
Teaching, Designing, and implementing a classroom system to track student progress, and take steps to ensure academic progress is where it should be - ~100 students for each class
CSCI 1301 Intro Computing Program (Java) – Fall 2020, Spring 2021
Lab instructor
CSCI 1301 Intro Computing Program (Java) – Spring and Summer 2020
Graduate Teaching Assistant
Supervise students during the non-classroom time and arrange recreational activities of undergraduate students; Work closely with the lead teacher to identify issues students are having and develop appropriate solutions; Attend teacher meetings; Assist with classroom instruction and provide support and guidance to students - ~100 students for each class
(2017-2019) Data structure, Computer Networking, and Computer Architecture organization
(Jun-Dec 2018) Graduate Assistant at the Business Office, Graduate School, UGA.
- 2000 - 2016 **Lecturer**
 Computer Science and IT Department, Kermanshah, Iran
CS courses at the undergraduate level
(2013-2016) Course Coordinator of IT Program, (part-time)
(2006-2016) Lecturer, Technical and Vocational University, (part-time)
(2013-2016) Lecturer, University of Applied Science (Academic Center for Education, Culture, and Research), (part-time)
(2000-2016) Teacher, Technical High School – (full time)

HONORS & VOLUNTEER EXPERIENCES

- Honors • **Poster**, "Video Captioning and Applications", CRA-WP Grad Cohort for Women, Virtual, USA, Apr, 2021

- **Paper Presentation**, “The Use of Video Captioning for Fostering Physical Activity”, International Symposium on Artificial Intelligence (CSCI-ISAI), USA, Dec 2020
- **Paper Presentation**, “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)
- **Paper Presentation**, “Image Captioning with Generative Adversarial Network”, International Symposium on Artificial Intelligence (CSCI-ISAI), USA, Dec 2019
- **CSCI 2019** , Computational Science and Computational Intelligence; "Artificial Intelligence" (CSCI-ISAI), **Sponsored**
- **Student Travel Grant**, International Symposium on Artificial Intelligence (CSCI-ISAI), Dec 2019
- **Poster**, “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
- **Poster**, “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
- **Poster**, “Video Caption Generation with Deep Learning“, First Annual Computing@SEC, The University of Alabama, Sep 2019
- **Student Travel Grant**, International Conference on Image Processing, Computer Vision, & Pattern Recognition (IPCV'19), Aug 2019
- **CSCE 2019** , The 23rd International Conference on Image Processing, Computer Vision and Pattern Recognition (IPCV'19), **Sponsored**
- **Paper Presentation**, “ 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
- **Student Travel Grant**, Computational Science & Computational Intelligence (CSCI'18), Dec 13-15, 2018
- **CSCI 2018**, 5th Annual Conf. on Computational Science & Computational Intelligence (CSCI'18), **Sponsored**
- **Paper Presentation**, “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
- **Poster**, “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
- **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 Experience

- **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
- **Scholarship Reviewer** with **2021 CMD-IT/ACM Tapia Conference**, May 2021
- **Special Award Judging for the 2021 Georgia Science and Engineering Fair**- US Agency for International Development Science Champion Award, March 30 - April 9, 2021
- **Judge - Georgia Science and Engineering Fair**
 - 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
- **Conference Session Chair**
 - The 2021 International Conference on Computational Science and Computational Intelligence (CSCI'21), USA, Dec 2021
 - The 2021 World Conference in Computer Science, Computer Engineering and Applied Computing (CSCE'21), USA, Jul 2021(virtual and in-person sessions)
 - The 2020 International Conference on Computational Science and Computational Intelligence (CSCI'20), USA, Dec 2020
 - 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
- **Paper Reviewer**
 - 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)

INVITED TALKS AND GUEST LECTURER

- Talks
- **Keynote Speaker**, “An Integrated Approach for Video Captioning and Applications”, at IEEE CCWC, January 26th - 29th, (45 minutes presentation), 2022
 - **Invited Panelist**, Data4Good and Girls Who Code (Women in Tech), University of Georgia, Athens, Georgia, USA, Oct, 2021
 - “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)
 - An invited guest presenter for 2020 UGA TA Orientation (with 650+ students), Aug, 2020
 - 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)
 - International TA Orientation: Key teaching assistant policies for international TAs and provide resources related to successful teaching and learning practices, University of Georgia (Aug 07 & 13, 2019)
 - Encouraging students specially girls to study at the Computer Science, County high school, Athens, GA, USA (April 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)
- Guest Lecturer
- 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, AND ACTIVITIES

- Certificates
- 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)
- Skills
- Specialize in **Image Processing, Deep Learning, Image and Video Captioning**, Machine Learning, Computer Graphics, Instructional Technology, Networks, Cyber Security, 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 the following tools/equipment/software:
- Programming Languages; SQL Server, Access, Excel as Databases; Powerpoint, Word, Photoshop, and 3DMax as Communication Applications; Hadoop, Packet tracer, OpNet as Network Application Softwares.
- Language Skills
- Persian (native), English, French, German, Arabic