

# MAI DAHSHAN

(+1) 540-505-7494 | [mdahshan@virginia.edu](mailto:mdahshan@virginia.edu) | [m-dahshan](https://m-dahshan.com)

## EDUCATION

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<b>Ph.D. Computer Science</b> <i>Virginia Tech, Blacksburg, VA</i>	May 2021
<b>M.S. in Computer Science</b> <i>American University in Cairo, Egypt</i>	Dec. 2013
<b>B.S. in Computer Science</b> <i>Suez Canal University, Ismailia, Egypt</i>	May 2008

## PROFESSIONAL EXPERIENCE

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<b>Assistant Professor</b> <i>School of Data Science, University of Virginia (UVA)</i>	August 2024 - Present
<b>Assistant Professor</b> <i>School of Computing, University of North Florida (UNF)</i>	August 2021 - May 2024
<b>Research Scientist</b> <i>Advanced Research Computing (ARC), Virginia Tech</i>	June 2021 - August 2021
<b>Doctoral Research</b> <i>InfoVis and Visionarium Labs, Virginia Tech</i>	August 2016 – May 2021
<b>Graduate Research Assistant</b> <i>Advanced Research Computing (ARC), Virginia Tech</i>	Summer 2017 – May 2021
<b>Summer Intern with Data Science at the Scale Group</b> <i>Los Alamos National Laboratory</i>	May - August 2019

## TEACHING EXPERIENCE

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<b>Instructor</b>	
<i>DS 6001: Data Engineering I: Data Pipeline Architecture (University of Virginia, USA)</i>	Fall 2025
<i>DS 1002: Programming for Data Science (University of Virginia, USA)</i>	Spring 2025, Summer 2025
<i>CS 5012: Foundations of Computer Science (University of Virginia, USA)</i>	Fall 2024
<i>CIS4930 ST: Intro to Python Programming (University of North Florida, USA)</i>	Spring 2024
<i>COP3855: Web Systems Development (University of North Florida, USA)</i>	Fall 2023
<i>COP6284: Programming for Data Science (graduate) (University of North Florida, USA)</i>	Fall 2022
<i>COP3503: Programming II (University of North Florida, USA)</i>	Fall 2021
<i>COP3813: Internet Programming (University of North Florida, USA)</i>	Spring '22 '23 '24, Fall '22 '23, Summer '23 '24
<i>CAP3784: Introduction to Data Analytics (University of North Florida, USA)</i>	Spring '22 '23 '24
<i>CS1064: Introduction to Programming in Python (Virginia Tech, USA)</i>	Summer 2020
<b>Graduate Teaching Assistant</b>	
<i>Computer Systems (Virginia Tech, USA)</i>	Fall 2015 - Spring 2017
<i>Information and Distributed System Security (American University in Cairo, Egypt)</i>	Fall 2014
<i>Computer Architecture (American University in Cairo, Egypt)</i>	Spring 2013, Fall 2013
<i>Object-Oriented Programming (American University in Cairo, Egypt)</i>	Fall 2012
<i>Fundamentals to Computer Science (American University in Cairo, Egypt)</i>	Fall 2011 - Spring 2012
<i>Introduction to Programming (Suez Canal University, Egypt)</i>	Spring 2011
<i>Data structures and Algorithms (Suez Canal University, Egypt)</i>	Spring 2010, Fall 2010
<b>Assistant Lecturer</b>	
<i>Operating Systems (Suez Canal University, Egypt)</i>	Spring 2014 - Spring 2015

## PUBLICATIONS

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- Ylagan, E.S., Parekh, H.P., Das, M. and **Dahshan, M.** 2025. Fostering Computational Thinking in Elementary Mathematics Instruction and Learning with the Support of Large Language Models. In Proceedings of the 30th ACM Conference on Innovation and Technology in Computer Science Education V. 2
- Marche, C., Valenty, H., Beck, M., Folks, R. and **Dahshan, M.** , 2025. . Robust Digitization of Perioperative Surgical Flowsheets From Low and Middle Income Countries. In 2025 Systems and Information Engineering Design Symposium (SIEDS)
- Dahshan, M.** and Galanti, T., 2024. Teachers in the Loop: Integrating Computational Thinking and Mathematics to Build Early Place Value Understanding. *Education Sciences*, 14(2), p.201.
- Dahshan, M.**, Polys, N., House, L., North, C., Pollyea, R.M., Turton, T.L. and Rogers, D.H., 2024. Human-machine partnerships at the exascale: exploring simulation ensembles through image databases. *Journal of Visualization*, pp.1-19.
- Dahshan, M.**, Polys, N.F., House, L., Youssef, K. and Pollyea, R.M., 2024. Human-Machine Collaboration for the Visual Exploration and Analysis of High-Dimensional Spatial Simulation Ensembles. In VISIGRAPP (1): GRAPP, HUCAPP, IVAPP (pp. 678-689).
- Mohamed, M.F., **Dahshan, M.**, Li, K. and Salah, A., 2023. Virtual Machine Replica Placement Using a Multiobjective Genetic Algorithm. *International Journal of Intelligent Systems*, 2023(1), p.8378850.
- Dahshan, M.** and Galanti, T.,2022. Designing Integrated Math+ CT Activities to Promote Sensemaking about Place Value in Grades K-2. In Proceedings of the 54th ACM Technical Symposium on Computer Science Education V.2 (pp. 1321-1321).
- Dahshan, M.**, Turton, T.L. and Polys, N., 2022. Exploration and Analysis of Image-base Simulation Ensembles. In EuroVis (pp. 91-93).
- Dahshan, M.**, House, L. ,Polys, N., 2020. High-dimensional spatial simulation ensemble analysis. In Proceedings of the 9th ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data (pp. 1-4).
- Dahshan, M.**, Polys, N., Jayne, R., and Pollyea, R. 2020. Making sense of scientific simulation ensembles with semantic interaction. In *Computer Graphics Forum* (Vol. 39, No. 6, pp. 325-343).
- Panwar, P., pang, Y., Zhang, D., **Dahshan, M.**, Debardeleben, N., Ravindran, B. and Jian, X., 2019. Quantifying memory underutilization in hpc systems and using it to improve performance via architecture support. In Proceedings of the 52nd Annual IEEE/ACM International Symposium on Microarchitecture (pp. 821-835).
- Dahshan, M.** and Poly, N., 2018. Making Sense of Scientific Simulation Ensembles. In SC18: The International Conference for High-Performance Computing, Networking, Storage and Analysis.
- Dahshan, M.** and Elkassass, S., 2014. Framework for securing data in cloud storage services. In 2014 11th International Conference on Security and Cryptography (SECRYPT) (pp. 1-8). IEEE.
- Dahshan, M.** and Elkassass, S., (2014, May). Data Security in Cloud Storage Services. In The Fifth International Conference on Cloud Computing (pp. 1-5).

## MENTORING

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Amelia Vasiliu, Undergraduate Student (Independent Study), School of Data Science, UVA	Fall 2025- Present
Dailin Li, Undergraduate Student, School of Data Science, UVA	Summer 2025- Present
Shrikar Sirobhushanam, Undergraduate Student, Department of Computer Science, UVA	Spring 2025- Present
Emma Ylagan, Undergraduate Student, Department of Computer Science, UVA	Fall 2024- Present
Heena Parekh, Undergraduate Student, Department of Computer Science, UVA	Fall 2024- Present
Malisha Das, Undergraduate Student, Department of Computer Science, UVA	Fall 2024- Present
Ahmed Sayed, MS Student, School of Computing, UNF	Spring 2023- Spring 2024
Ram Venkatapuram, Undergraduate Student (Independent Study), UNF	Summer 2023
Kelvin Vargas, Undergraduate Student (Independent Study), UNF	Fall 2022
Robert Rutter, Undergraduate Student (Independent Study), School of Computing, UNF	Fall 2022
Bharani Kothareddy, MS. Student (Independent Study), School of Computing, UNF	Spring 2022
JooYoung Whang, MS. in Computer Science, Virginia Tech	Fall 2019 - Spring 2020
Kalyani Gadgil, MS. in Computer Science, Virginia Tech	Fall 2018

## GRANTS

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<b>(PI) Jefferson Trust</b> <i>Personalized student support and stronger, AI-empowered, teaching assistants (Award:~\$155,000)</i>	UVA Share: ~\$155,000 2025 -2027
<b>(Co-PI) 4-VA Collaborative Research Grant</b> <i>Educating Tomorrow's Business Leaders: World Changers' Youth Business Leadership Camp (Award:~\$7,000)</i>	UVA Share: \$5,000 2025 -2025

<b>(Co-PI) Center for Advanced Subsurface Earth Resource Models (CASERM)</b> <i>Visual Data Analytics for Mining Applications in 3D and Image Spaces (Award:~\$250,000)</i>	UNF Share: \$40,000 2022 -2024
<b>(Co-PI) Center for Advanced Subsurface Earth Resource Models (CASERM)</b> <i>Integrating Sequential Simulation with Visual Ensemble Analytics for Mining Applications (Award: \$65,000)</i>	UNF Share: \$20,000 2021 - 2022
<b>(PI) UNF Foundation Board Initiatives</b> <i>Integrating Computational Thinking in Mathematics Education in PK-3</i>	Total: \$20,000 2022-2023
<b>(PI) First-year Osprey Connections Experience</b> <i>Computational Thinking in General Education Curriculum</i>	Total: \$4,000 2022

## ACADEMIC HONORS AND AWARDS

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Travel grant from UVA Center for Global Inquiry And Innovation (Center Grants) to attend SIPECO conference	2025
Recognition Award - 14th Scholars Transforming Academic Research Symposium (STARS) - UNF	2023
UNF Deserving Faculty Award - Graduating Senior Survey	Spring 2023
NSF grant to attend and present at JLab A.I. for Nuclear Physics workshop	2020
NSF Scholarship to attend Tapia Conference	2019
Travel grant from VT CS Dept. and ARC to attend and present at SuperComputing Conference	2018
Scholarship from the VT CS Dept. to attend Grace Hopper Conference	2018
Computer Science Fellowship, Virginia Tech	2015 - 2017
CRA-W Scholarship to attend Grad Cohort Workshop, Virginia Tech	2016
University Fellowship, American University in Cairo	2011 - 2013
School of Sciences and Engineering Honors, American University of Cairo	2012

## PROFESSIONAL SERVICES

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Designed and delivered the first AI Literacy Bootcamp for high-school students at SDS@UVA	Summer 2025
Co-designed and delivered Youth Business Leadership and AI Camp for middle-school students at JMU	Summer 2025
Faculty Representative, Women in Computing Sciences (WiCS) Hackathon at UVA	Spring 2025
Faculty Marshal (University & School ceremonies) at UVA	Spring 2025
Faculty Marshal (University) at UNF	Spring 2024
Program Committee:	
o Intelligent User Interfaces (IUI) (2026)	
o BigSpatial (2022, 2023 and 2024)	
o SIGCSE(Paper - Experience Reports and Tools) (2023 and 2024)	
o SIGCSE - Birds of a Feather (2023)	
Reviewer:	
o Journal of Education Sciences	
o Journal of Frontiers in Education	
o PacificVIS'23 '25	
o SIGCSE'23 '24	
o CHI'23	
o IUI'23	
o HRI '23 '25 '26	
o TEI'23	
o HAI '22	
o ozCHI'20	
o VT GSA Research Symposium'18 '19	
Graduate recruiting weeks at Virginia Tech, poster presentation and lab tours	Spring 2016, Spring 2018
Student Volunteer during Virginia Tech Career Fair	Spring 2018 - Fall 2019

## PROFESSIONAL DEVELOPMENT

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UNF Faculty Development Training : Distance Learning Course Development (DCD)	Spring 2024
UNF Faculty Development Training : Teaching Online Foundation	Spring 2022
Future Professoriate Certificate	Fall 2019
Human-Computer Interaction (HCI) Certificate	Spring 2018
9-Month Diploma in Unix Platform, Information Technology Institute, Cairo, Egypt	2008 - 2009

## MEMBERSHIPS

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<b>Member</b> , UVA Learning Community: Fostering AI Literacy for Students and Ourselves	Fall 2025 - Present
<b>Member</b> , UNF's Peer-Review of Teaching Community of Practice	Spring 2023- Summer 2024
<b>Member</b> , National Center for Women and Information Technology (NCWIT)	Fall 2021- present
<b>Member</b> , UNF's Diversity and Inclusion committee	Fall 2021- Summer 2024
<b>Member</b> , UNF's Faculty search committee	Fall 2021 - Spring 2022
<b>Member</b> , Virginia Tech Graduate Academy for Teaching Excellence (VTGrATE)	Fall 2020 - Spring 2021
<b>Member</b> , Women in High-Performance Computing (WHPC)	Fall 2018 - Present
<b>Member</b> , Society for Industrial and Applied Mathematics	Fall 2018 - Present