

Rawan Alghofaili

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EDUCATION

GEORGE MASON UNIVERSITY | PHD IN COMPUTER SCIENCE

August 2022 | Fairfax, VA
 Mentor: Lap-Fai (Craig) Yu

UNIVERSITY OF MASSACHUSETTS | MS IN COMPUTER SCIENCE

December 2018 | Boston, MA
 Mentor: Lap-Fai (Craig) Yu

CORNELL UNIVERSITY | MENG IN COMPUTER SCIENCE

May 2014 | Ithaca, NY
 Mentor: Hod Lipson

KING SAUD UNIVERSITY | BS IN INFORMATION TECHNOLOGY

June 2011 | Riyadh, Saudi Arabia

EXPERIENCE

META REALITY LABS | RESEARCH INTERN

May 2021 – Dec 2021 | Fairfax, VA (Remote)
 Exploring interactions for uncertainty in gaze-driven models for AR/VR
 Mentor: Ben Lafreniere
 Collaborators: Tanya Jonker, Michael Glueck, Ting Zhang and Naveen Sendhilnathan

ADOBE RESEARCH | RESEARCH INTERN

May 2020 – Aug 2020 | Fairfax, VA (Remote)
 Content authoring for AR via 2D sketch to 3D curve creation
 Mentor: Cuong Nguyen
 Collaborators: Vojtěch Krs, Nathan Carr and Radomír Měch

CORNELL UNIVERSITY | RESEARCH INTERN

June 2014 – Aug 2014 | Ithaca, NY
 Furniture style classification from 2D images using a Convolutional Neural Network (CNN)
 Mentor: Kavita Bala

PUBLICATIONS

- [1] Yu Liuchuan, Huining Feng, **Rawan Alghofaili**, Boyoung Byun, Swati Rampalli, Yoosun Chung, Vivian Genaro Motti, and Lap-Fai Yu. "An AI-driven AAC system on HoloLens". UIST'23. (*under review*).
- [2] Wei Liang, Luhui Wang, Xinzhe Yu, Changyang Li, **Rawan Alghofaili**, Yining Lang, and Lap-Fai Yu. "Optimizing Product Placement for Virtual Stores". In: *2023 IEEE Conference Virtual Reality and 3D User Interfaces (VR)*. 2023, pp. 336–346.
- [3] **Rawan Alghofaili**, Cuong Nguyen, Vojtěch Krs, Nathan Carr, Radomír Měch, and Lap-Fai Yu. "WARPY: Sketching Environment-Aware 3D Curves in Mobile Augmented Reality". In: *2023 IEEE Conference Virtual Reality and 3D User Interfaces (VR)*. 2023, pp. 367–377.
- [4] Lap-Fai Yu, Changyang Li, Yongqi Zhang, **Rawan Alghofaili**, Haikun Huang, Liuchuan Yu, Huimin Liu, Minsoo Choi, Brenda Bannan, and Christos Mousas. "Establishing Design Computing and Extended Reality Facilities for Remote Virtual Reality Training". In: *2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*. 2023, pp. 216–220.
- [5] Wei Liang, Xinzhe Yu, **Rawan Alghofaili**, Yining Lang, and Lap-Fai Yu. "Scene-Aware Behavior Synthesis for Virtual Pets in Mixed Reality". In: *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. CHI '21. Yokohama, Japan: Association for Computing Machinery, 2021. isbn: 9781450380966.
- [6] **Rawan Alghofaili**, Matthew Fisher, Richard Zhang, Michal Lukáč, and Lap-Fai Yu. "Exploring Sketch-based Character Design Guided by Automatic Colorization". In: *Graphics Interface 2021*. 2021.

- [7] Biao Xie, Huimin Liu, **Rawan Alghofaili**, Yongqi Zhang, Yeling Jiang, Flavio Destri Lobo, Changyang Li, Wanwan Li, Haikun Huang, Mesut Akdere, Christos Mousas, and Lap-Fai Yu. "A Review on Virtual Reality Skill Training Applications". In: *Frontiers in Virtual Reality 2* (2021), p. 49. issn: 2673-4192.
- [8] **Rawan Alghofaili**, Yasuhito Sawahata, Haikun Huang, Hsueh-Cheng Wang, Takaaki Shiratori, and Lap-Fai Yu. "Lost in Style: Gaze-driven Adaptive Aid for VR Navigation". In: *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. CHI '19. Glasgow, Scotland Uk: ACM, 2019, 348:1–348:12. isbn: 978-1-4503-5970-2.
- [9] **Rawan Alghofaili**, Michael Solah, Haikun Huang, Yasuhito Sawahata, Marc Pomplun, and Lap-Fai Yu. "Optimizing Visual Element Placement via Visual Attention Analysis". In: *2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*. 2019, pp. 464–473.

PATENTS

- [1] Tanya Renee Jonker, Candace Peacock, Benjamin Lafreniere, Ting Zhang, Hrvoje Benko, **Rawan Alghofaili**, and Michael Glueck. "Systems and methods for using natural gaze dynamics to detect input recognition errors". Pat. US Patent App. 17/866,179. 2023.

PROFESSIONAL SERVICES

Program Committee:

- CHI Late-Breaking Work (LBW) (2023)
- ETRA short papers (2023)
- ACM SIGGRAPH / Eurographics Symposium on Computer Animation (SCA) (2023)
- IEEE MetaCom (2023)
- ACHI (2019)

Associate Chair:

- CHI PLAY 2022 Work-In-Progress (WiP) (2022)
- ETRA short papers (2021)

Reviewer:

- CHI (2020-2023) • UIST (2023) • IEEE VR (2020-2023)
- TOG (2023)
- TVCG (2023)
- VRST (2020-2021)
- CHI PLAY (2020)
- CASA (2019)
- CAVW (2019)

Student Volunteer: SIGGRAPH (2020)

Workshops: TrainingXR@IEEE VR: Workshop on 3D Content Creation for Simulated Training in eXtended Reality (2020)

Invited Talks:

- MAGFest: Music and Gaming Festival (2023)
- T-Mobile Advanced and Emerging Technologies (2022)
- NHK Science & Technology Research Laboratories (2019)

Invited Panels: MAGFest: Music and Gaming Festival - Education in VR panel (2023)

AWARDS

2022 Distinguished Academic Achievement Award (Department of Computer Science at George Mason University)
 2011-2022 Awarded the King Saud University fellowship

MENTORING

- Yining Lang: Masters student at Beijing Institute of Technology, now at Alibaba Group
- Xinzhe Yu: Masters student at Beijing Institute of Technology
- Swati Rampalli: Undergraduate student at University of Minnesota, NSF REU program
- Adrienne Hembrick: Undergraduate student at Virginia Commonwealth University, NSF REU program
- Minyoung Kim: PhD student at George Mason University

TEACHING

UNIVERSITY OF MASSACHUSETTS | LECTURER

Sept 2018 - Jan 2019 | Boston, MA

Undergraduate course: CS105 - Introduction to Computer Concepts

- Instructed two sections of 22 and 25 students

- Prepared all course material including lecture notes, assignments and in-class activities
- Adjusted syllabus to allow for an easy and enjoyable introduction to the field for students of non-STEM backgrounds
- Taught programming skills including high-quality website design using HTML/CSS
- Utilized Unity as a platform for teaching game design
- Incorporated 3D printing and design to introduce fabrication techniques

UNIVERSITY OF MASSACHUSETTS | TEACHING ASSISTANT

Jan 2018 - May 2018 | Boston, MA

Undergraduate course: CS410 - Introduction to Software Engineering

KING SAUD UNIVERSITY | TEACHING ASSISTANT

Nov 2011 – June 2012 | Riyadh, Saudi Arabia

Undergraduate course: CSC112 & CSC113 - Computer Programming I and II

- Taught an introduction to object-oriented programming in Java to 40-120 students
- Evaluated students, provided feedback on their performance, prepared homework solutions, administered lesson review and graded quizzes

SKILLS

PROGRAMMING

Machine Learning: TensorFlow • scikit-learn • OpenCV • OpenGL • Matlab

Augmented/Virtual Reality: ARKit • Unity

Mobile Development: Android • IOS

Data Analysis: SPSS

Platform: Git • AWS

Over 5000 lines: \LaTeX • Python • Swift • C++ • C# • Java • JQuery • JavaScript • MySQL • HTML • CSS

Over 1000 lines: Ajax • PHP • VB.NET • Rails

Familiar: NodeJS • Assembly

LANGUAGES

Native proficiency: English • Arabic

REFERENCES

- **Lap-Fai (Craig) Yu:** Associate Professor at George Mason University, Dissertation Advisor
- **Cuong Nguyen:** Research Scientist at Adobe Research
- **Ben Lafreniere:** Research Scientist at Meta Reality Labs
- **Yasuhito Sawahata** Research Scientist at Japan Broadcasting Corporation