

Besmelh Alshaalan

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EDUCATION

KAUST (King Abdullah University for Science and Technology)

Thuwal, KSA

Masters in Computer Science

Anticipated Dec 2024

University of Rochester

Rochester, NY

Bachelor of Science in Computer Science | Minor in Digital Media Studies; GPA: 3.51

May 2023

CAREER SYNOPSES

- **Video Game & Graphics Expert:** Experience in 3D modeling and video game development with Unreal Engine and Unity, and crafting custom shaders, including photorealistic and toon-shading raytracers using WGSL.
- **AI & Machine Learning:** Completed advanced coursework in Artificial Intelligence, Machine Vision, and Machine Learning.
- **User Research & Product Design:** Proficient in UI/UX design and prototyping for web, mobile, and XR software, alongside hardware projects, emphasizing user research and usability testing for optimal product design.
- **Web & App Development:** Skilled in full-stack web & iOS app development, applying user-research for user-centric solutions.
- **Adaptive Leader:** Proven leadership in diverse environments, guiding teams to innovate and adapt to technological shifts.
- **Global Perspective:** Brings a diverse international outlook to projects, merging cultural insights with inclusive design.

PROFESSIONAL EXPERIENCE

Researcher, Nanovisualization Research Group, KAUST, Thuwal, Saudi Arabia

Jan 2024 – Present

- Converting functionality of an existing OpenGL application to WebGPU, allowing an automatic camera animation as part of a molecular biology visualization system to create documentary-style videos.

Teaching Assistant, University of Rochester

Aug 2021 – May 2023

- Video Game Development class (Spring 2023), supporting students as they develop games in Unreal Engine.
- iOS Mobile App Development class (Fall 2021), helped students as they developed iOS apps in Swift.

Media Tech Intern, NBCUniversal, Los Angeles, CA

June 2022 – Aug 2022

- Assisted in enhancement requests, quality assurance testing, user acceptance testing, and rollout of features.

Tech and Product Intern, Millie Group, New York, NY

May 2021 – Aug 2021

- Finalized the features of Millie's internal website through user research and designed the UI/UX via Figma.
- Developed a PERN Stack (PostgreSQL, Express, React, NodeJS) app, and managed the database through PostgreSQL & AWS.

IBM Accelerate Software Apprenticeship, IBM, Virtual

May 2021 – July 2021

- Enhanced the technical and foundational skills needed to succeed in the software development industry.

EXTRACURRICULAR ACTIVITIES

Phobigone

Aug 2022 - Dec 2022

VR game application to help users overcome their phobias (fear of the dark, heights, small spaces).

- Designed a scene in Unity depicting a realistic cityscape with 3D building, animated objects, and collectable items.

BalanceBuddy

Jan 2022 - May 2022

Website (prototype) to balance between students' schoolwork & internship search process through daily tasks & progress dashboard.

- Conducted user research, designed prototypes in Figma, & performed usability testing for the working prototype.
- Developed the back-end of the webpage and Chrome extension using React, and set up a MongoDB database.

EXTRACURRICULAR ACTIVITIES

ShenTech Entrepreneurship Bootcamp, InnoX Academy, Shenzhen, China.

Jan 2024

- Recognized as a top project; a shoe-cleaning device, designed by conducting user research, prototyping, and market analysis.

Student Volunteer, SIGGRAPH Asia 2022, Daegu, South Korea

Dec 2022

- Supported the conference's events like the Computer Animation Festival & Emerging Technologies exhibition.

Marketing & Design Team Lead, DandyHacks Hackathon 2022, Rochester, USA

Mar 2022 – Nov 2022

- Lead a team of 4 to design and market publicized content, and utilize Airtable to keep track of tasks and goal.
- Increased participation by 60% (150 total) and project submissions by %277 (25 total) from the previous year.

SKILLS

- Python, C, C++. C#, JavaScript, Java, Swift, React, SQL, R, WGSL, WebGPU, OpenGL
- Unreal Engine, Unity, Blender, Figma, Adobe Illustrator, Adobe Premiere Pro
- Adaptability, creativity, problem-solving, leadership
- Native, Arabic; Fluent, English