

Besmelh Alshaalan

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CAREER SYNOPSIS

- Computer Graphics & Video Games:** 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 Learning, and Machine Vision.
- User Research & Product Design:** Proficient in UI/UX design and prototyping for web, mobile, and XR software, in addition to hardware products, emphasizing user research and usability testing for optimal product design.
- Web & App Development:** Skilled in full-stack web & iOS app development, integrating user research for user-centric solutions.
- Adaptive Leader:** Demonstrated leadership in diverse environments, guiding teams to innovate and adapt to technological shifts.
- Global Perspective:** Offer a diverse international outlook to projects, merging cultural insights with inclusive design.

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

PROFESSIONAL EXPERIENCE

Researcher, Nano-visualization 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), supported students as they develop games in Unreal Engine.
- Recreational Graphics class (Fall 2022), assisted students as they 3D modeled in Blender.
- 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.

PROJECTS

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 and 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, Bash, GIT, numpy, scipy, sklearn, pytorch
- Unreal Engine, Unity, Blender, Figma, Adobe Illustrator, Adobe Premiere Pro, Adobe Photoshop
- Adaptability, creativity, problem-solving, leadership
- Native, Arabic; Fluent, English