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, & 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