NAN LI

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EDUCATION

University of Southern California — Los Angeles, California
Master of Science, Computer Science — January 2024-Present
- GPA: 3.71/ 4.0
- Computer Animation and Simulation: Physics simulation with advanced graphics techniques
- Computer Networking: Paper reading/discussion, congestion control
- Game Engine Development: navigated and contributed to extensive codebases
- Haptic Interfaces and Virtual Environments: Haptic interface with virtual environment, design of user study

Arizona State University — Tempe, Arizona
Bachelor of Science, Computer Science — September 2019-August 2023
- GPA: 4.0 / 4.0
- Dean's List every semester
- Computer Graphics: Basic computer graphics knowledge and WebGL API

EXPERIENCE

University of Southern California — Los Angeles, California
Lab Volunteer — June 2025-Present
- Lab Volunteer at HaRVI Lab: Haptics Robotics and Virtual Interaction
- Develop and draft detailed project proposals for Redirected Walking
- Perform comprehensive literature searches to identify relevant studies and inform experimental design

University of Southern California — Los Angeles, California
Immersive Fluid Project — January 2025-Present
- Design and implement a real-time fluid simulation system utilizing the Position-Based Fluids (PBF) algorithm, integrating haptic feedback and virtual reality (VR) rendering to create immersive and interactive fluid dynamics experiences
- Utilize compute shaders to parallelize computations in the fluid simulation system, boosting performance and enabling real-time interaction
- Design and conduct user studies to evaluate the fluid simulation system, analyzing data to improve usability and immersion

University of Southern California — Los Angeles, California
Inverse Kinematic and Skinning Project — February 2024-May 2024
- Designed and implemented object animations using forward and inverse kinematics (IK)
- Evaluated and compared various IK algorithms, assessing computational efficiency and effectiveness in animating complex movements
- Compared linear blend skinning and dual quaternion skinning methods, assessing impact on mesh deformation quality and selecting the optimal approach for realistic character animation

Arizona State University — Tempe ,Arizona
Teaching Assistant — January 2021-May 2021
- Supervised exams, enforcing academic integrity policies and creating a secure testing environment for all students
- Provided individualized academic support during scheduled office hours, addressing student inquiries and clarifying course material to enhance understanding
- Ensured timely collection and accurate documentation of student assignments, maintaining organized records for faculty review

ACTIVITIES

USC ACM SIGGRAPH Student Chapter — Los Angeles, California
Campus Relations — January 2025-Present
- Collaborated with several team members to invite industry professionals for knowledge-sharing sessions on SIGGRAPH topics
- Facilitated a workshop on graphics APIs and GPU programming, enhancing participants' technical skills and fostering industry engagement
- Coordinated event agendas and managed resource allocation, ensuring seamless event execution through meticulous planning and collaboration with stakeholders

SIGGRAPH 2025 Student Volunteer   Vancouver, Canada
Student Volunteer   August 2025-August 2025
- Collaborated with a diverse team of volunteers and staff to achieve daily operational goals and resolve on-site challenges
- Communicated clearly and professionally with international attendees, presenters, and exhibitors, representing the SIGGRAPH organization

TECHNICAL SKILLS

- Programming Languages: C++, C, Java, Python, JavaScript, C#
- GPU Programming skills: CUDA, Compute Shader, RenderDoc, Nvidia Nsight Compute
- Tools & frameworks: WebStorm, Visual Studio, GitHub, Unity
- Graphics API: OpenGL/WebGL, WebGPU, Vulkan