

Archit Kumar

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EDUCATION

Yale University

New Haven, CT

Simultaneous B.S. + M.S. Computer Science, 4.0/4.0 GPA

Aug. 2022 – May 2026

- **Relevant Coursework:** Systems Programming, Game Engine Programming, Real-Time 3D Graphics Programming, Physics Simulation Programming, Compilers & Interpreters, Full Stack Web Programming

EXPERIENCE

Yale Computer Graphics Group

May 2025 - Jun. 2025

Research Intern under Prof. Holly Rushmeier

New Haven, Connecticut

- * Leveraged the Godot engine to digitally model the Dura-Europos archaeological site from image data.

Yale Efficient Computing Lab

Jun. 2024 - Sep. 2024

Research Intern under Prof. Lin Zhong

New Haven, Connecticut

- * Integrated the ParaMax network performance algorithm in C++ for Agora, a novel software-based system for handling massive multiple-input multiple-output (MIMO) in 5G networks.

Minnapad

May 2024 - Jul. 2024

Generative AI Engineering Intern

Tokyo, Japan (Remote)

- * Automated Stable Diffusion workflows for image creation, streamlining dataset generation for model training.
- * Optimized prompts and fine-tuned parameters to ensure consistent and reproducible outputs.
- * Worked with renowned clients including Keiji Inafune (artist for *Mega Man* series) and Seiichi Ishii (designer for *Tekken* series).

Wildchain (Nonprofit Game Studio)

Jun. 2021 – Sep. 2021

Software & Animation Intern

Bangkok, Thailand (Remote)

- * Designed, programmed, and animated 20+ in-game flora and fauna using Adobe Photoshop and C#.
- * Collaborated directly with the project manager to identify critical priorities for the game's beta release.

People for the Ethical Treatment of Animals (PETA)

Jun. 2020 – Sep. 2020

Web Game Developer

New York, New York (Remote)

- * Initiated development of the Unity/C# web game “[Monkey Fright](#)” raising awareness about laboratory cruelty.
- * Strategically collaborated with PETA's Vice President of Marketing to amplify the game's social media presence.

PROJECTS

Skater Gator | *Unity, C#, Adobe Photoshop, Autodesk Sketchbook, Xcode*

Dec. 2019 – Jan. 2023

- * Conceived and directed an iOS [mobile game](#) which has achieved 3600+ downloads from 118 different countries.
- * Oversaw end-to-end development encompassing programming, art, animation, music, release, and marketing.

Cortex Crusader Game Engine | *Dlang, SDL*

Nov. 2024 - Dec. 2024

- * Led a team of three in engineering a custom [game engine](#) with both 2D and simulated 3D (Mode 7) capabilities.
- * Implemented the engine's GUI, save/load functionality, game object editor, and demo game.

Terrainer | *Unity, C#, Mapbox SDK*

Jan. 2022 – Mar. 2022

- * Supervised a team of four in building an experimental 3D Unity game incorporating real world satellite data.
- * Modeled and animated realistic avatar characters using Avatar Maker for Unity.

2D Kinematic Collisions | *C++, OpenGL*

Feb. 2025

- * Implemented realistic ragdoll physics for a custom 2D mesh, incorporating the latest Neo-Hookean techniques.
- * Programmed collision detection and hand-derived relevant response equations with calculus and linear algebra.

TECHNICAL SKILLS

Languages: C/C++, C#, Rust, Java, Python, JavaScript, OCaml, x86-64 Assembly, SQL, Dlang

Developer Tools: Unity, OpenGL, Linux, Visual Studio, Android Studio, Xcode, Git, GitHub