

Urjasvi Suthar

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EXPERIENCE

USDKIT | SOFTWARE DEVELOPER INTERN | [LINK](#)

Sep 2024 – May 2025 | Remote

- Codebase consisted of C, Objective C (ObjC), Metal GAPI and Pixar's USDA file format.
- Worked on text rendering and implemented multiple methods on CPU/GPU, like Blinn-Loop, Ray-Curve and Ray-Line.
- Researched on improving font legibility and dynamic re-sizing.
- Implemented different animation techniques (on CPU and GPU): Caches, Transforms and Skeletal Animations (LBS and DQS).
- Animation techniques were validated by comparing against industry standard softwares like Blender and Maya.
- Utilised dev tools like Instruments, LLDB, XCode's graphical debugger and custom SVG exports, to find and debug problems.

REALITYBOB | SOFTWARE DEVELOPER INTERN | [LINK](#)

June 2023 – Feb 2024 | Remote

- Worked on porting C++ and Dawn codebase to Web, including custom JS and C++ code to bridge gap between stdlib and web technologies.
- Worked with web technologies like WASM, WebGPU and IndexedDB.
- Documented porting process and usage of various techniques encountered along.
- Worked independently and alongside seasoned industry member.
- Studied feasibility of porting C++ graphics application to Web for long-term.

EXTRACURRICULAR

CLUB ENIGMA | COMPUTER GRAPHICS LEAD

Aug 2023 – July 2024 | IIITS, Sri City

- Taught juniors about computer graphics, it's concepts and various rendering techniques.
- Started multiple projects under multiple domains. Guided juniors on their projects and also worked along side them on some.
- Conducted various sessions, industry guest talks and major events under the club.

PROJECTS

UNDEFINEDLANGUAGE | AN PROGRAMMING LANGUAGE THAT TARGETS WASM | [Link](#)

- Designed and built a complete 4-stage compiler (Tokenizer -> Parser -> Analyzer -> Codegen) from scratch with zero external dependencies, targeting WebAssembly bytecode generation.
- Implemented recursive descent parser with symbol table management, AST generation using contiguous arrays, and type checking system across multiple passes.
- Implemented statically-typed language supporting functions with parameters/returns, control flow (while loops, if/else), variable declarations, and primitive types (int, float, bool) with foreign function interface to JavaScript.

EDUCATION

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, SRI CITY

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE

Graduated 2nd Aug 2025 | Sri City, Andhra Pradesh

SKILLS

PROGRAMMING

Experience:

C • ObjC • C++ • Python

Non-Experience:

Zig

TECHNOLOGY

Metal • OpenGL • WebGPU • GLSL • AArch64 •

LLDB • GDB • XCode • Instruments •

MacOS • UNIX • WASM •

Git/Github • Linux • CMake •

TOPICS

Computer Architecture • Instruction Set

Architecture • Compiler Engineering •

Graphics Programming •

Debugging • Performance Analysis

LINKS

Github:// [BlackGoku36](#)

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Website:// [BG36Notes](#)