

# Prem kumar

Software Engineer

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## Skills

### Languages

Javascript, Typescript, C, C++

### Frameworks & Libraries

React, Next.js, Nest.js, Express.js

### Database

PostgreSQL, MYSQL, Redis

### Tools

Git, Docker

## Profiles

premkumar5012002

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## Summary

Software Engineer with strong skills in JavaScript and TypeScript through experience building full stack applications.

## Education

**Bharath Institute of Higher Education and Research**  
Computer Science  
8.4 CGPA  
Bachelor of Technology  
**2019 – 2023**

## Projects

### Windows 98 Portfolio

Windows 98 inspired portfolio site build using react from scratch.

- Designed and developed a Windows 98-inspired portfolio website using React, creating a nostalgic and user-friendly interface.
- Integrated interactive elements, such as draggable windows and desktop-like navigation, to enhance the user experience.
- Built the site from scratch, utilizing React components, state management, and hooks to ensure seamless functionality.

React, Next.js, Windows 98, Portfolio

https://github.com/premkumar5012002/windows-98-portfolio

### 2D Game Engine

2D Game Engine written in C++.

- Developed a 2D game engine from scratch using C++
- Implemented an Entity-Component-System (ECS) architecture for modular and flexible game object management, promoting reusability and scalability.
- Integrated Lua scripting for game developers to easily write and modify gameplay logic and event handling without recompiling the engine.

C++, Game Engine, Lua

https://github.com/premkumar5012002/2d-game-engine

### QuickNotes

A simple web based notes app for your note taking needs.

- Implemented rich text editor to improve note-taking with features like inline styling and code blocks.
- Added custom throttling to prevent brute-force attacks on login, password recovery, and email verification.
- Integrated Lucia auth for secure user login and session management.

React, Next.js, PostgreSQL, Redis

https://github.com/premkumar5012002/quick-notes

### Tiny 3D

Tiny Software based 3D Renderer build using C.

- Developed a 3D software renderer from scratch using C
- Implemented support for loading and rendering OBJ 3D models in the renderer.
- Added texturing capabilities, enabling the renderer to apply UV-mapped textures to 3D models.

C, 3D Renderer, Graphics

https://github.com/premkumar5012002/tiny-3d

### Discuss

Discuss – Reddit-like discussion forum website.

- Implemented next.js streaming for fetching comments for the post, resulting in faster page load time.
- Implemented Optimistic Updates for upvoting and downvoting posts to provide instantaneous feedback for user actions.
- Implemented rich text editor for post creation and edit.

React, Next.js, PostgreSQL, Redis

https://github.com/premkumar5012002/discuss