

# Manish Kala

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## Professional Summary

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Skilled Software Engineer with expertise in system programming, full-stack development, embedded systems, and competitive problem-solving. Proficient in C, C++, JavaScript, Angular, and low-level software design. Strong in algorithms, debugging, and collaborative development in fast-paced environments.

## Work Experience

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### Software Engineer

Noida, India

Virtual Engineering Services PVT. LTD.

July 2022 – Present

- Architected a scalable solution in C/C++ for converting 3D objects to 2D PDF drawings, significantly improving system reliability and performance.
- Implemented multi-threading and concurrency in C++ to speed up data processing in large-scale simulations, reducing computational time by 40
- Utilized advanced optimization techniques in HTML, CSS, JavaScript, and Angular to reduce load times by 30%, facilitating the efficient display of complex, heavy models within web applications.
- Leverages the Three.js library to create immersive 3D graphics and interactive visualizations for web applications, enhancing user engagement and interactivity.

### Software Engineer

New Delhi, India

Extrieve Technologies

Aug 2021 – July 2022

- Collaborated with the cross-functional team to design and implement three key projects, resulting in a 25% increase in overall process efficiency and a 15% reduction in delivery timelines.
- Designed and developed a document image scanning system using C++ that automated the digitization process, cutting the manual processing time by 50% and boosting throughput by 30%.

## Education

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### Kurukshetra University

Sept 2016 – Dec 2020

Bachelor of Technology in Computer Science

- **Coursework:** Data Structures and Algorithms, Operating Systems, Database Management Systems, Computer Networks, Software Engineering, Compiler Design, Computer Architecture, Theory of Computation, Artificial Intelligence, Machine Learning

## Skills

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**Technical Skills:** C, C++, JavaScript, Angular, Laravel, HTML, CSS, Three.js, x86 Assembly, POSIX sockets, Git

**Soft Skills:** Collaborative Teamwork, Problem solving, Adaptability

## Projects

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### Content Management System (CMS)

[www.thejat.in](http://www.thejat.in) 

- Developed a robust CMS for managing blogs, courses, and coding challenges, enhancing content delivery and user engagement.
- Developed a scalable back-end using Laravel with RESTful API integration, ensuring smooth data flow and system reliability.
- Designed an intuitive and responsive admin dashboard that streamlined content creation and management.
- Tools Stack: Laravel

## Custom Operating System along with Boot Loader

[github.com/The-Jat/TheTaaJ](https://github.com/The-Jat/TheTaaJ) 

- Engineered and implemented a 32-bit x86 operating system kernel from scratch.
- Utilized the framebuffer for graphical output, supporting text rendering, and basic 2D graphics.
- Integrated an ISO 9660 boot system and advanced memory management features.
- Technologies used: C, C++, x86 Assembly, Make, QEMU, VirtualBox.

## Lightweight HTTP Server

[github.com/The-Jat/CppWeb](https://github.com/The-Jat/CppWeb) 

- Developed a fast and minimal HTTP server using C++ socket programming without external libraries.
- Handled HTTP/1.0 and HTTP/1.1 GET requests with proper request parsing and response generation.
- Served static content (HTML, CSS, JS, images) directly from the filesystem.
- Implemented basic HTTP response codes (200 OK, 404 Not Found, 400 Bad Request, etc.).
- Tools Stack: C / C++, POSIX sockets, Make build system.