

Developer & Graphic Designer

SHIVAM RAI

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LinkedIn :- [Shivam Rai](#)

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OBJECTIVE

Motivated MCA student with a strong foundation in software development, data structures, and databases, seeking an internship or entry-level role to apply technical skills to real-world projects. Eager to work with modern web and backend technologies, contribute to high-quality, reliable software, and continuously learn from experienced engineering teams in a collaborative environment

EDUCATION

- **MASTER'S IN COMPUTER APPLICATION** **2025-2027**
SRM Institute of Science and Technology, Chennai
- **BACHELOR OF COMPUTER APPLICATION** **2022-2025**
Shri Ramswaroop Memorial College of Engineering and Management
- **XII (CBSE)** **2020-2021**
Lucknow Public School
- **X (CBSE)** **2019-2020**
Lucknow Public School

TECHNICAL SKILLS

- **Programming Language:** Java, C, Python
- **Web Technologies:** HTML, CSS, JavaScript, MERN stack(React.js, Node.js, Express.js, MongoDB)
- **Version Control:** Git, GitHub
- **Database Management System:** SQL, MySQL
- **Concepts:** Software Development Lifecycle, Cybersecurity Basics, DSA
- **Graphic Designing:** Adobe Photoshop
- **Video Editing:** Adobe After Effect, Adobe Premiere Pro,
- **3D Modelling:** Blender
- **Drone Hardware and Flight Knowledge - Mission Planner, Pixhawk, Tx Rx, GPS etc.**

SKILLS

- **Problem-Solving**
- **Teamwork & Collaboration**
- **Communication**
- **Time Management**
- **Adaptability & learning**

Projects

Freestyle Drone

Technologies: Pixhawk (32-bit ARM Cortex M4, 168 MHz), ArduPilot, Mission Planner, Brushless motors, ESCs, GPS module, FPV camera

- **Flight Platform:** Assembled custom quadcopter with brushless motors controlled by ESCs, achieving stable multi-rotor flight with sensor payload capability.
- **Autopilot System:** Configured Pixhawk with ArduPilot firmware enabling autonomous flight modes including Stabilize, Alt Hold, Loiter, and Auto with 3D waypoint navigation.
- **Autonomous Features:** Implemented Return-to-Launch (RTL), auto missions, and GPS-guided flight paths using Mission Planner software for waypoint-based navigation.
- **Telemetry & Safety:** Integrated real-time monitoring of altitude, speed, battery voltage, and GPS coordinates with failsafe protocols for radio loss and low battery conditions.

Interactive 3D Portfolio - [Techwithshivam](#)

Technologies: Next.js 14, TypeScript, Three.js (GLSL), Tailwind CSS

- **High-Performance Architecture:** Built an optimized SSR app achieving **95+ Lighthouse scores** via dynamic imports and route-based splitting.
- **Custom WebGL Shader:** Engineered Laser Flow, a raw GLSL renderer maintaining **60 FPS** on mobile through adaptive resolution scaling.
- **Optimization:** Reduced Cumulative Layout Shift to **0.01** using persistent layouts and cut asset payload by **90%** via procedural generation.
- **Production Readiness:** Implemented comprehensive SEO metadata, JSON-LD, and error boundaries for **100% crawlability** and crash resilience.

Bloemed Pharmaceuticals - [bloemed.com](#)

Technologies: HTML5, CSS3 (SCSS), Bootstrap 5, JavaScript (ES6)

- **Responsive Architecture:** Developed a 40+ page corporate platform with Bootstrap 5 achieving 100% mobile responsiveness and <2s load times on 3G networks.
- **Custom Canvas Animation:** Built particle physics system using HTML5 Canvas API and requestAnimationFrame for interactive hero section without external libraries.
- **Product Showcase:** Architected modular component structure displaying 300+ pharmaceutical products across 12 therapeutic categories with dynamic filtering.
- **Performance Optimization:** Implemented scroll-triggered animations (Waypoints.js) and lazy loading to improve Core Web Vitals scores.

Work Experience & Achievements

- Conducted hands-on drone workshops for **100+ students** across multiple schools through the **Robotics Club**, covering basics of multirotor, safety, and live flight demonstrations.
- Represented the institute at the **G20 Summit**, showcasing custom-built drones and explaining their applications in surveillance and aerial mapping to visitors and delegates.
- Completed a 2-month internship as a **Quality Assurance Tester at Reflex Drive**, testing **50+ drone** components (ESCs, flight controllers, frames) and documenting defects, contributing to a **20% reduction** in component failure rates and **15% improvement** in QA throughput.