Arnav Tiwari

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Education

Indian Institute of Information Technology Nagpur (IIIT Nagpur)   *Nov 2022–July 2026*
BTech in Computer Science Engineering, Roll no: BT22CSE036

Experiences

Software Developer Intern, *Hitachi India Pvt. Ltd., Nagpur, Maharashtra*   *July 2025 – Present*

- Contributed to the development and optimization of **Single Line Diagrams (SLDs)** to support power system visualization and analysis.
- Conducted extensive research on **IntervalZero RTX64 Real-Time Operating System (RTOS)** to assess integration potential with industrial automation systems.
- Collaborated on building web based IT solutions for Steel Manufacturing Industries - **DPS (Digital Permit System), RCTMS (Roll Coolant Tank Monitoring System), PTMS (Pickling Tank Monitoring System), TTMS (Truck Turnaround Monitoring System), and ICQIS (Intelligent Coating Quality Improvement System)**.
- Worked with senior engineers to analyze technical requirements, implement modular software components, and ensure cross-platform reliability.

FullStack Developer Intern, *Payatu Security Consulting Pvt. Ltd., Pune, Maharashtra*   *May 2025 – Jun 2025*

- Collaborated in a 20-member team to build core modules for a **security platform** targeting 10,000+ enterprise users.
- Developed responsive Next.js+ SCSS interfaces, cutting load times by **35%**. Created **10+** interactive data visualizations using charting libraries.
- Built and optimized MySQL-backed APIs, improving backend speed by **40%**. Contributed to production code with **90%** test coverage, following secure coding and agile practices.
- Built responsive interfaces using Next.js and SCSS, reducing page load times by **25%** and improving frontend maintainability.

Academic Projects

AI Content Generator App   **link**
Next.js, Clerk, Drizzle ORM, PostgreSQL, Tailwind CSS, TypeScript, Razorpay, Google Gemini API

- Developed a modern AI-powered content generation platform using Next.js and TypeScript, enabling users to create high-quality content 70% faster than traditional methods.
- Engineered a seamless authentication and user management system with Clerk, improving user onboarding efficiency by 50%. Designed and implemented a scalable backend with Drizzle ORM and PostgreSQL, supporting 17+ dynamic content templates and handling 10,000+ monthly content generations.
- Integrated Razorpay for secure, real-time subscription payments, increasing user conversion rates by 35%. Built a responsive, mobile-first UI with Tailwind CSS, achieving a 98% Lighthouse performance score and ensuring accessibility across all devices.
- Leveraged the Google Gemini API for advanced AI content creation, delivering 99.9% uptime and robust, real-time content delivery. Implemented a user dashboard with real-time usage tracking, billing management, and content history, enhancing user engagement and retention by 40%.

Book Store – Personalized Book Collection   **link**
React(+Vite), Tailwind CSS & Daisy UI, Node.js, Express.js, MongoDB, JWT tokens, bcrypt.js, Multer, Dotenv, CORS

- Built a responsive full-stack book management platform with 15+ modular UI components and fast Vite-powered builds.
- Developed RESTful APIs with Express.js for 7+ endpoints supporting CRUD operations and user auth via JWT & bcrypt.js.
- MongoDB with Mongoose for schema validation across 3+ collections. Integrated Multer for secure image uploads.
- Ensured robust security (JWT, CORS) and scalable architecture demonstrating end-to-end MERN proficiency.

Pass Vault – Password Manager   **link**
React (+Vite), Tailwind CSS, Node.js, MongoDB, Framer Motion

- Built a secure, full-stack password manager for 150+ users with encrypted credential storage.
- Used MongoDB for securely storing user passwords with schema validation and fast retrieval.
- Optimized modular CRUD APIs reducing operation time by 40%.
- Designed an engaging UI with Framer Motion, boosting user engagement by 30%. Ensured security via hashed storage and protected routes.

Skills

Languages: C/C++, Java, JavaScript (ES6+), Typescript, HTML, CSS (Tailwind CSS, SCSS), Java, Python, XML
Frameworks & Libraries: React.js (Vite), Next.js, Node.js, Express.js, Bootstrap, Drizzle ORM, Clerk, Redux, Django
Databases: MongoDB, MySQL, PostgreSQL
Cloud & DevOps: Vercel, Netlify, Docker, Kubernetes, CI/CD Pipelines, GitHub Actions
Payment & API Integrations: Razorpay, Google Gemini API, RESTful APIs
Tools, Platforms & Technologies: Git, GitHub, VS Code, Drizzle Studio, Postman, AutoCAD, Android Studio, Agile, Scrum