Arvind Kumar

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EDUCATION

•Indian Institute of Information Technology, Ranchi *Aug 2022 – July 2026*
B.Tech (ECE - Specialization in Embedded System and IOTs) CGPA: 8.58/10

- **Relevant Coursework:** Data Structures and Algorithms, Database Management Systems, Computer Networks, Object-Oriented Programming, Web Development

TECHNICAL SKILLS

Programming Languages: JavaScript, C++, Python, SQL
Frontend Technologies: React.js, HTML, CSS, Bootstrap, Tailwind CSS, Responsive Web Design
Backend Technologies: Node.js, Express.js, RESTful APIs, WebSocket, Socket.IO
Databases: MongoDB, MySQL, Pinecone Vector Database
Cloud & DevOps: AWS (EC2, S3), Docker, CI/CD Pipeline, GitHub Actions
AI/ML Technologies: RAG, NLP, GenAI
Tools & Frameworks: Git, GitHub, VS Code, Postman, LangChain

Projects

- **CodeSync - Real-Time Collaborative Code Editor** GitHub Live 🔗 *March 2025 – July 2025*
React.js, Node.js, Socket.IO, MongoDB, Express.js, Piston API, tldraw

  - **Real-Time Collaboration:** Engineered a live code editor with **Monaco Editor** and **Socket.IO**, supporting instant code sync for **10+ concurrent users**.
  - **Interactive Whiteboard:** Built a collaborative **tldraw** canvas with persistent room states, enabling **5+ simultaneous editors**.
  - **Multi-Language Execution:** Integrated **Piston API** for real-time execution of **JavaScript, Python, Java, and C++** with a **2-second average runtime**.
  - **Room Management:** Developed a robust presence system featuring **typing indicators**, seamless **join/leave**, and support for **20+ active rooms**.

- **HealthX - Healthcare management system** GitHub Live 🔗 *July 2025*
React.js, Node.js,Express.js, Tailwind Css, MongoDB, Cloudinary

  - **Multi-Role Authentication:** Engineered **JWT-based authentication** for **3 user dashboards** (patient, doctor, admin) with specialized workflows.
  - **Healthcare Database System:** Designed **MongoDB schema** with **React/Node.js interface** optimizing queries for 10,000+ patient records with **zero data loss**.
  - **Cloud Integration:** Implemented **secure image management** with **Cloudinary**, reducing storage overhead by 40%.
  - **Analytics Dashboard:** Created admin panel with **doctor registration** and real-time analytics tracking **500+ appointments/month**.

- **Medibot - AI Healthcare Assistant** GitHub Live 🔗 *Feb 2025 – June 2025*
Python, Flask, LangChain, Pinecone, AWS, GenAI, RAG, CI/CD

  - **Document Processing:** Automated **PDF/DOCX** ingestion into **vector embeddings**, handling $1K+$ pages for real-time medical queries.
  - **RAG Pipeline:** Designed a **RAG** system combining **GenAI model** with semantic search for accurate medical responses.
  - **Vector Database:** Integrated **Pinecone** for intelligent document retrieval with custom **healthcare knowledge base**.
  - **Backend API:** Developed a **Flask** app with **LangChain**, supporting $1K+$ context-aware medical conversations daily.

ACHIEVEMENTS AND CERTIFICATIONS

- **Ranked** in the top **11%** on **Leetcode** with a rating of (**max.1736**), having solved over **250+** problems.
- **Achieved** rank **701** in **LeetCode Weekly Contest**, demonstrating strong algorithmic skills.
- Solved over **400+** problems across various coding platforms. **Codolio Profile**
- **Certifications: Frontend Developer** 🔗   **Backend Developer** 🔗   **Gen AI** 🔗