ARUNAVA PARI

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PROFESSIONAL EXPERIENCE

Software Engineer (Intern and Contributor) – Open Health Care Network (OHCN) | CARE   Kochi, Kerala
Technologies: Cypress, CI/CD, Next.js, TypeScript,Flask
- Contributed to **CARE**, a **UN-recognized Digital Public Good**, by implementing **200+ features** focused on **responsive design**, **security**, and **privacy**.
- **Optimized performance by 55%** by minimizing unnecessary **re-renders**, reducing redundant **API calls**, and implementing **debouncing strategies**.
- Developed a **UI for 4K screens**, integrating **WebSockets** for **live EMR visualization** while ensuring a **fully responsive design**.
- Enhanced **test automation** by fixing **Cypress test cases** and refining **UI components**.
- Implemented efficient **data fetching** using **useQuery** and developed **custom hooks**.
- Contributed to a platform impacting **40,000+ individuals** across **9 states**, making **healthcare more accessible**.
- **Proof of contribution:** Intern Profile | GitHub Repository

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, C, Java ,Python ,Problem Solving
Frontend: Tailwind, Next.js, React.js, Bootstrap, EJS
Backend: Node.js, Express.js, Next.js,Flask
Database: PostgreSQL, MongoDB (Atlas), REST API, Postman
DevOps: Docker, Azure DevOps, AWS (EC2), Webpack, CI/CD
Testing: Jest, Jasmine, Cypress
Data Science: NLTK, NLP, NumPy, Pandas, Matplotlib

PROJECTS

32-bit Operating System Kernel (**C, NASM, QEMU, x86, i686-elf cross compiler**)   **GitHub**
- Developed a custom **32-bit kernel** in **C** with an **Assembly**-based **bootloader** that switches to **protected mode** and loads the kernel.
- Set up **GDT**, enabled the **A20 line**, and handled **disk loading** to transition control to the kernel from the bootloader.
- Implemented basic **VGA text mode** output and **keyboard input** handling using **IRQ1** and a custom **IDT**.
- Used **QEMU** for testing and debugging; built with an **i686-elf cross compiler** for **OS development**.

Collaborative Multi-User Code Editor (Next.js, Socket.io, MongoDB, AWS EC2)   **GitHub**
- Real-time collaboration via **WebSocket** for seamless multi-user coding.
- Optimized with **Webpack** and **AWS** for low latency.
- **Unlimited collaborators** for enhanced teamwork.

VS Code Extension (Node.js, TypeScript, Webpack, Microsoft Azure)   **GitHub**
- Developed **Ask-To-Me**, a globally accessible VS Code extension.
- Integrated **Groq AI** for intelligent coding assistance.
- Enables AI-driven code generation, editing, explanation, test generation, bug detection, and error diagnosis.

Learning Management System (Node.js, Express.js, PostgreSQL, CSRF, JEST)   **GitHub**
- Implemented role-based access control: Student: Access courses post-enrollment. Teacher: Create courses, track student progress, view enrollments, and analyze course popularity via bar graphs.
- Integrated **CSRF protection** to prevent unauthorized requests.
- Secured API endpoints with authentication and CSRF tokens.
- Conducted unit and API testing using **Jest**.

ACHIEVEMENTS AND CERTIFICATES

- Ranked in the top 5% in the NPTEL Data Science in Python course from IIT Madras. [Link]
- **Certified in Production-Ready Deployment** covering **Docker, CI/CD, Automation Testing, and Performance Optimization**.
  [Certificate Link]
- Ranked in the top 2% in the NPTEL DataBase Management System from IIT Khargapur. [Link]
- Solved 450+ questions on **LeetCode** and **GeeksforGeeks**.

EDUCATION

University of Engineering & Management, Jaipur, India   CGPA: 8.9
B.Tech. (Computer Science and Engineering)   2026