Ratul Chatterjee

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Professional Overview

Full Stack Developer with hands-on experience in building scalable, responsive web applications using React.js, FastAPI, Flask, and TypeScript. Implemented CI/CD pipelines using GitHub Actions and Docker for two projects, leading to a 40% faster deployment cycle and reducing integration errors by 25% through automated testing. Developed and deployed five scalable web applications utilizing React.js, FastAPI, and TypeScript, achieving a 99.9% uptime and reducing page load times by 30% through optimized backend logic with Node.js. Applied AI/ML tools like PyTorch and Scikit-learn to real-world projects, delivering measurable outcomes. Precision-focused, cross-functional collaboration, and a passion for solving real-world challenges through innovative, user-centric solutions.

Education

Kalinga Institute of Industrial Technology (KIIT) University   Bhubaneshwar, Odisha
*Bachelor of Technology, Computer Science and Engineering | **CGPA:** 7.85*   *September 2022 – July 2026*

Technical Skills

- **Languages**: Python, C, JavaScript, C++
- **Web Development Frameworks**: React.js, TypeScript, HTML5, CSS3, FastAPI, Flask, Typescript
- **Databases**: MongoDB, MySQL
- **Cloud and DevOps**: AWS, GCP, Docker, Git, Containerization
- **AI/ML Tools**: PyTorch, Scikit-Learn, NumPy, Pandas
- **Design and Visualization**: Figma, Photoshop, Power BI, Tableau

Experience

KIIT E-Cell | **Graphic Designer**   (Hybrid)
Senior Executive (Full-time)   *December 2023 - Present*
- Designed 20+ responsive UI/UX assets for event dashboards and marketing using Figma and Photoshop.
- Coordinated with marketing, operations, and tech teams to develop full-stack features across events.

Projects

Custom-Chatbot | *Python, LLM, Hugging Face* | **(Github-Link)**   **June 2024**
- Engineered an LLM-based AI chatbot that improved query resolution accuracy by 18% across 300+ requests, during the Intel Unnati Industrial Training in 2024.
- Constructed a robust AI chatbot leveraging PyTorch and Pandas, which integrated seamlessly with existing CRM systems; now handles 150+ inquiries daily, reducing average handling time by 40% for the customer service team.
- Enhanced chatbot performance through iterative prompt engineering and model refinement, achieving a 12% improvement in user satisfaction scores based on post-interaction surveys and feedback analysis.

Water Quality Analyser | *HTML, CSS, Python, Machine Learning* | **(Github-Link)**   **March 2025**
- Built a real-time web application to classify organic vs inorganic water samples with 87% accuracy using XGBoost.
- Designed interactive UI and visual dashboards in Power BI for result interpretation by environmental analysts
- Applied data cleaning, ML model training, and UI integration using Flask-based endpoints.

Certifications and Competitions | (Drive-Link)

- Palo Alto - Cybersecurity and Network Security (Completed) - July 2025
- AWS Academy Cloud Architecting (Completed) - July 2025
- Chronos v1.0 GenAI Hackathon – Built Speech-to-text Meeting Summarizer - February 2025
- AICTE Eduskills Full Stack Python Developer (Completed) - October 2024
- AWS Academy Machine Learning (Completed) - July, 2025