Piyush Singhal

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EXPERIENCE

Web Development Intern | June 2024 – August 2024
The Sparks Foundation | *Remote*

- Engineered a secure and highly scalable full-stack banking system using **HTML, CSS, JavaScript (ES6)**, and **MySQL**, featuring user authentication, transaction tracking, and balance updates via **RESTful APIs**.
- Implemented **JWT auth**, **bcrypt hashing**, and session handling for secure user management; optimized backend and SQL for **30% faster** response time using modular **MVC architecture**.
- Managed version control using **GitHub** and **GitHub Actions**, tested APIs with **Postman**, and deployed a containerized instance using **Docker** for real-world performance simulation with **100+ simulated users**.

PROJECTS

YouTube Comment Sentiment Analysis Platform | GitHub Link Website Link

- Built an NLP-driven sentiment analysis platform using **Python**, **Google Colab**, and **Anvil**, achieving **92% classification accuracy** on **1000+ YouTube comments**.
- Integrated **YouTube Data API** for data collection and applied **TextRank** for topic extraction; visualized trends using **Matplotlib** in a real-time **Anvil UI** dashboard.
- Reduced latency by **40%** and processing overhead by **35%** through API optimization, efficient data handling, and deployment via **Docker** and **Google Drive API**.

PDF Chat Application Analysis | GitHub Link Website Link

- Architected AI-powered PDF assistant using **LangChain**, **OpenAI LLMs (GPT-3.5)**, and **FAISS**, enabling semantic search and real-time document-based Q&A with over **90% response accuracy**.
- Implemented document parsing and semantic indexing using **PyPDF2** and **HuggingFace/BERT** embeddings, enabling users to perform accurate context-based queries through scalable **FAISS**-powered vector search.
- Developed a lightweight, production-grade **Streamlit UI** with multi-tab navigation and async handling; deployed via **Docker** to efficiently serve **500+ real-time queries/day** on low-memory systems.
- Collaborated with a team of peers using **Agile practices**, including sprint planning and code reviews, and communicated progress regularly through virtual stand-ups and GitHub issue tracking.

Personal Portfolio Website | GitHub Link Website Link

- Developed a fully responsive Single Page Application (SPA) using **React.js, HTML5, CSS3, and JavaScript** with modular components, reusable layout, and route-based rendering via **React Router**.
- Improved accessibility and SEO using meta tags, semantic HTML, keyboard navigation, and responsive design.
- Achieved a **40% reduction in initial load time** and **25% boost in user engagement** through performance tuning, lazy loading, scroll animations, and automated CI/CD deployment using **GitHub Actions**.

EDUCATION

NIMS University | Jaipur, India
Bachelor of Technology in Computer Science(2nd Year), CGPA: 9.33/10 | *2023 – 2027*

ACHIEVEMENTS

- Solved **500+ DSA problems** on platforms like **CodeChef** and **LeetCode**, strengthening core coding skills.
- Secured **AIR 83** among **20,000+ participants** in **CodeChef Starter 184 (2025)** .
- Developed a real-time **Face Recognition System** using advanced **image processing techniques**, achieving high accuracy in facial detection; showcased at **IIT Indore Hackathon (Fluxus 2025)**.
- Achieved a **1600+ rating** on **CodeChef** and **Codeforces**, ranking in the top percentile nationally.

TECHNICAL SKILLS

Programming Languages: C, C++, Python, Java, JavaScript, SQL
Web Technologies: React.js, Node.js, RESTful APIs, HTML, CSS, Bootstrap, Next.js
AI/ML Stack: LangChain, LLMs (GPT, BERT), NLP, Sentiment Analysis, PyTorch, Anvil
Tools: Git, GitHub Actions, Google Cloud, Kubernetes, PyPDF2, Google Colab, Streamlit, AWS, Docker
Core Concepts: Data Structures and Algorithms, OOPS, DBMS, CI/CD, Agile (Scrum), Teamwork, Communication