Parth Jain

Software engineer specializing in backend development and data science solutions

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EDUCATION

Rutgers University - New Brunswick	Sept 2021 - May 2023
Master of Science: Computer Science	GPA: 3.96/4.00

Courses: Advanced Algorithms, Databases, Software Engineering, Advanced Machine Learning, Massive data mining.

University of Mumbai	Aug 2017 - June 2021
Bachelor's of Engineering: Computer Engineering	GPA: 8.37/10.00

Courses: Data structures, object-oriented programming with Java, database management system, linux, operating systems.

SKILLS

- **Languages**: Python, Javascript, SQL, Java, HTML, CSS, PHP, prompt engineering.
- **Libraries/Frameworks**: Django, FastAPI, PyTest, React.js, PyDantic, Node.js, PyTorch, Jest, Pandas, LangChain.
- **Databases/Cloud** : MySQL, Postgres, MongoDB, AWS (S3, Lambda, DynamoDB), Azure, Azure ML, Weaviate.
- **Technologies**: Git, Agile, Linux, Docker, Postman, Visual Studio, Jira.

EXPERIENCE

Software Engineer Intern (Generative AI) | **Foundational AI** | DE, USA (Remote)　　　　Oct 2023 - Present
- Designed scalable Azure-based backend for a SaaS platform, to provide enterprise-focused Generative-AI solutions.
- Devised REST APIs and React components for no-code development of RAG-based bot, providing 5x user productivity.
- Implemented model selection service to recommend best models for a specific use case, reducing user cost by 30%.
- Optimized MongoDB database for better data sorting and retrieval, refining data access operations by average of 4 s.
- Refactored Python code to improve performance with design patterns and unit testing, reducing latency by 200 ms.

Research Assistant | **RUCI lab** | NJ, USA　　　　Aug 2022 - Sept 2023
- Built stock portfolio optimizer using Plotly, and streamlit, enabling investors to analyze and select best stock mixes.
- Deployed website with FastAPI and React to enable data exploration with visualizations, contributing to GSODI.
- Developed Tensorflow-based framework for user-specific handwritten OCR applications, to increase accuracy by 10%.
- Programmed Jupyter Labs to give a hands-on approach to AI, increasing enrollment by 50% for a Coursera course.

Software Engineer Intern | **Mahavir Coconut Industries** | KA, India　　　　Dec 2020 - Feb 2021
- Built e-commerce website using Django and PostgreSQL for coconut oil producer, increasing sales by $50K annually.
- Incorporated client feedback for UI interfaces and third-party integrations increasing average cart value by 10%.
- Built analytics tools for inventory management, resulting in unified interface to view resource availability and orders.
- Collaborated with diverse team with Agile, to align backend solutions with frontend, ensuring seamless integration.

Software Engineer Intern | **Navlakhi** | MH, India　　　　June 2020 - July 2020
- Engineered assessment platform, using PHP, HTML, CSS and Javascript to conduct tests and track academic progress.
- Established microservice architecture and APIs to automate assessments, reducing educators' manual effort by 50%.
- Coded weighting algorithm using Java to adjust question difficulty based on previous responses for adaptive test.

PROJECTS

The Culinary Theory [Repository]
- Deployed recipe blogging website featuring an intuitive interface with AWS, attracting 100+ users to share recipes.
- Coded and tested 10+ REST APIs with Node.js, Redis, and Jest for third-party integrations, dynamic search functionality, and CRUD operations to boost platform functionality, resulting in 20% surge in user engagement.
- Integrated premium features and business policies to create revenue stream and enhance user experience.
- Trained and integrated transformer model, enabling users to generate recipes from food images, achieving 0.9 recall.

WhatsApp Clone [Repository]
- Successfully developed WhatsApp clone with modular architecture using Next.js, Node.js, Firebase, and Socket.io.
- Expanded core backend micro-services for the app, incorporating features like private chat and large media sharing.
- Prioritized user privacy and security by implementing end-to-end encryption and OAuth authentication.

Text Generation using CONT
- Implemented CONT framework to achieve a 35% improvement in ROUGE-L scores for common-sense generation and a 10% increase for text summarization, utilizing T5 transformers in PyTorch, outperforming the Naive-CL benchmark.

PUBLICATIONS
- Radar Based User Discrimination System for Medication Adherence Monitoring, IPSN, ACM, 2023 [PDF] (WINLAB).
- Adaptive Framework for Numerical Digits Recognition with OCR Methods, MDPI, 2023 [PDF] (RUCI lab).