

Aranya Ray

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PERSONAL DETAILS

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SKILLS & INTERESTS

Skills: Data Science, Data Analysis, Machine Learning Algorithms, Data Mining, Deep Learning, Statistics, Natural Language Processing, Generative AI, Data Structures and Algorithms, Prompt Engineering, Data Processing

Frameworks: Numpy, Pandas, Matplotlib, Seaborn, Tensorflow, Keras, Sklearn, Pytorch, NLTK, Transformers, OpenCV, Flask, Django, FastAPI, Langchain, Dockers

Tools: Power BI, Tableau, Jupyter Notebook, VS Code, Git, Postman, IBM Zos Explorer, AWS

Languages: Python, COBOL, HTML, CSS, JS

Soft Skills: Excellent written and verbal communication, Strong analytical skills, Problem-solving skills with a focus on detail and accuracy, Adherence to timelines and deliverables, Proven ability to work collaboratively in a team environment, Adapting to new technologies and methodologies, Demonstrated leadership skills with experience in guiding teams

WORK EXPERIENCE

Cognizant Technology Solutions

Gurgaon, Haryana

Software Engineer

Aug 2020 - Present

- Created an innovative application that offered customers the option to receive reports in soft copy rather than hard copy, which was previously unavailable. This new feature reduced delivery costs by 50%, printing costs by 60%, and overall operational expenses by streamlining the report distribution process. The application not only contributed to significant cost savings but also enhanced the customer experience by providing a more environmentally friendly option.
- Collaborated with cross-functional teams to implement the new soft copy option, leading to a 20% increase in customer adoption of digital solutions. This initiative reduced the company's carbon footprint, aligning with sustainability goals, and improved the company's reputation for being environmentally conscious.
- Spearheaded the development of custom code modules from concept to deployment, addressing evolving customer needs and integrating new functionalities into existing systems. This initiative led to a 30% increase in customer interactions on the website, directly contributing to revenue growth and improved customer engagement.
- Refined code enhancements in response to customer feedback, achieving a 25% increase in customer satisfaction scores. By reducing service response times to under 2 hours for critical issues, the team improved the overall customer support experience and boosted client retention.
- Led a team of developers in utilizing SQL and DB2 language programs within the Mainframe environment to manage and manipulate data efficiently. Our efforts reduced product delivery and testing time by 40%, ensuring timely and accurate access to critical business information, thereby enhancing the overall productivity of the department.
- Engineered robust Service and API solutions using ZOS Explorer to streamline data retrieval processes from Mainframe applications. This initiative resulted in a 40% reduction in data processing time, significantly improving operational efficiency and enabling the team to handle increased workloads with the same resources.

PROJECT EXPERIENCE

Omdena

Remote

Data Scientist

Nov 2023 - Feb 2024

- Project Title:** Analyzing Brain Scan Images for the Early Detection and Diagnosis of Alzheimer's Disease
- Description:** The journey of collaborating on the "Analyzing Brain Scan Images" project with a diverse global team from 50+ countries has been both enriching and rewarding. As a Junior Data Scientist, I played a pivotal role in data collection, augmentation, and model development, collaborating closely with experts from different backgrounds. Together, we meticulously crafted a custom Convolutional Neural Network (CNN) architecture, leveraging advanced techniques like hyperparameter tuning with Keras-Tuner
- Key Contributions:**
- Spearheaded efforts in data collection and augmentation, ensuring the availability of high-quality data for model training and validation.
- Led a model development team to develop a custom CNN architecture, focusing on feature extraction and optimization to enhance model performance.

- Collaborated with team members on model deployment using Streamlit for the front end, Dockerization for backend infrastructure, and Hugging Face's spaces for seamless deployment, ensuring accessibility and user-friendliness of the solution.

Artificial Data Analyst

AI Engineer

- **Project Description :** An intelligent no-code data analytics platform leveraging LLMs and Microsoft's LIDA framework to automate data cleaning, data visualization, insight generation, and statistical analysis tasks traditionally performed by data analysts, featuring natural language-driven visualization editing and automated data-faithful infographic generation.
- **Key Features :**
 - **Secure Access:** Implemented user registration and JWT-based authentication for enhanced security.
 - **Data Management:** Enabled seamless upload and management of CSV, Excel, and JSON file formats.
 - **Automated Feature Engineering:** Designed a no-code interface for feature engineering and feature selection.
 - **LLM-Powered Analytics:** Automated data summarization, visualization goal generation, editing, evaluation, and explanation using cutting-edge LLMs.
 - **Multi-LLM Support:** Integrated support for leading LLM providers, including OpenAI, PaLM, Cohere, Hugging Face, and Groq Cloud.
- **Impact :**
 - Simplified data analysis for non-technical users, reducing dependency on data analysts.
 - Enhanced productivity by automating time-intensive tasks with LLM-driven solutions.
 - Delivered actionable insights faster, enabling data-driven decision-making.

Code Assistant

AI Engineer

- **Project Description:** Developed an AI-powered code assistant for Visual Studio Code as an extension, designed to enhance developer productivity by automating code analysis, debugging, documentation, and refactoring tasks. The assistant leverages advanced language models to provide real-time insights and suggestions directly within the IDE.
- **Key Features:**
 - **Code Analysis and Debugging:** Implemented a comprehensive code analysis service that identifies syntax errors, potential bugs, and code improvements using both static and AI-powered analysis techniques.
 - **Automated Documentation Generation:** Developed a service to automatically generate detailed documentation for code, including function descriptions, parameter details, and usage examples.
 - **Refactoring Suggestions:** Created a refactoring service that suggests code improvements such as simplification, renaming, and redundant code removal.
 - **Inline Code Completion:** Utilized context-aware AI models to develop an inline code completion feature that provides real-time code suggestions as developers type based on the current code context, enhancing coding speed and accuracy.

Feedback Review Analyst

AI Engineer

- **Project Description :** Designed a sophisticated web application utilizing advanced analytics and Groq Cloud LLMs to extract actionable insights, identify customer sentiments, and uncover emerging trends from user feedback. The platform features robust user and admin authentication for secure access.
- **Key Features :**
 - **Secure Authentication:** Implemented user registration with JWT-based authentication for secure and seamless access.
 - **Feedback Management:** Enabled feedback submission for authenticated users, fostering valuable user engagement.
 - **AI-Powered Sentiment Analysis:** Leveraged Groq Cloud LLMs to automate sentiment analysis, trend identification, and topic discovery from feedback data.
 - **Scalable Database Integration:** Integrated MongoDB for efficient storage and management of user and feedback information.
- **Impact :**
 - Delivered precise and actionable insights into customer feedback, empowering data-driven decision-making.
 - Simplified feedback management and analysis through AI-driven automation.
 - Enhanced scalability and security for user and data handling.

EDUCATION

IIST, Shibpur

BTech in Mining Engineering

Kolkata, West Bengal

Graduation Date: Apr 2020

BITS Pilani

MTech in Data Science and Engineering

Pilani, Rajasthan

Graduation Date: Oct 2023