RAJASHRI DEKA | ✉ rajashrideka07@gmail.com | 📱 (+91)-6000797881 | 🔗 rajashrideka | 🐙 rshdeka | 📄 Portfolio

TECHNICAL PROFICIENCIES

- ✓ **Programming languages:** Python, C++
- ✓ **ML:** Supervised/Unsupervised Leaning, Ensemble models
- ✓ **Generative AI:** Prompt Engineering, LLMs, RAG, Langchain, Agentic AI (BrowserUse + Playwright)
- ✓ **Cloud Services:** Azure Functions, Azure Cosmos DB, Azure Databricks, Azure Cognitive Search, Azure Logic Apps, Azure Event Grid
- ✓ **Web Frameworks:** Flask, FastAPI
- ✓ **Data Management:** SQL, Azure Cosmos DB
- ✓ **Data & Processing**: PySpark, NumPy, Pandas, Scikit-learn
- ✓ **Tools/Platforms:** Power BI, GitHub, GitHub Actions, Postman

EDUCATION

B.Tech
National Institute of Technology Silchar
07/2019 – 05/2023   *GPA: 8.68*

12th standard (CBSE Board)
Gurukul Grammar Senior Secondary School
03/2016 – 03/2018

CERTIFICATIONS

- AI-102: Microsoft Azure AI Engineer Associate Certification
- AI-900 : Microsoft Azure AI Fundamentals Certification
- AZ-900 : Microsoft Azure Fundamentals Certification
- Google Data Analytics Certificate
- SQL Certificate - HackerRank
- Python Certificate – HackerRank

WORK EXPERIENCE

Optum Global Solutions Private Limited | Gurugram
SOFTWARE ENGINEER | 09/2023 – Present

PROJECT: Contact Insights | 09/2023 – 10/2024

- **Automated Optum Bank's Customer Support data flow pipeline:** Streamlined the data pipeline by utilizing Generative AI to automate the extraction of key information (such as product details, potential root causes, etc.) from chats loaded in Azure Databricks. The results are stored in Cosmos DB, with scheduled Databricks jobs running at regular intervals. Achieved **96.7%** alignment with manual entries.
  - *Tech Stack*: Python, SQL, LLM (AzureOpenAI), Prompt Engineering, Azure Cosmos DB, Azure Databricks.
  - *Benefit*: Increased operational efficiency by automating data processing and reducing manual analysis workload.

- **Automated real-time Chatbot Evaluation Workflow:** Developed a RAG workflow triggered via Azure Event Grid to evaluate user-assistant interactions in real-time, using metrics like similarity, fluency, relevance scores, etc., with results stored in Cosmos DB.
  - *Tech Stack*: Python, LLM (AzureOpenAI), RAG, Prompt Engineering, Azure Functions, Azure Cosmos DB, Azure Event Grid.
  - *Benefit*: Improved chatbot response quality, enhancing customer satisfaction.

- **Automated on-demand Newsletter Generation:** Developed a system to generate newsletter with dynamic insights on Customer Support issues, incorporating visualizations like pie charts and bar graphs. Enabled dynamic updates for selected chats.
  - *Tech Stack*: Python, LLM (AzureOpenAI), Prompt Engineering, Azure Functions.
  - *Benefit*: Boosted stakeholder engagement by **80%**, aiding in timely decision-making.

- **Facilitated seamless data migration** across various platforms (Azure Cosmos DB, Azure Cognitive Search, Azure Databricks, Power BI) using **Python** APIs, ensuring **100% data integrity** across platforms.

PROJECT: AI Advancements | 11/2024 – Present

- **Automated Code Documentation Generation for GitHub:** Implemented a GitHub Action that automatically generates code documentation for both new and existing files in PRs. This action triggers on new PRs and commits the documentation directly to the repository.
  - *Tech Stack*: Python, LLM (AzureOpenAI), Prompt Engineering, Azure Functions, GitHub Actions.
  - *Benefit*: Maintains 100% up-to-date documentation, and aiding new team members understand the codebase efficiently.

- **Automated FHIR Test Data Creation:** Built an API utilizing Generative AI to generate FHIR bundles including key healthcare resource-types (like Patient, Condition, Encounter, Appointment, etc.) with dynamic customization options.
  - *Tech Stack*: Python, LLM (AzureOpenAI), Prompt Engineering, Azure Functions.
  - *Benefit*: Reduce manual test data creation time by **95%**, from 45 minutes to 3 minutes per patient, boosting test cycle speed.

- **Automated UI Browser Testing by utilizing an Agentic AI framework:** Developed an Agentic AI framework with Langchain, BrowserUse, and Playwright. This setup utilizes Generative AI to dynamically generate automation scripts requiring minimal modifications.
  - *Tech Stack*: Python, Prompt Engineering, Langchain, BrowserUse, Playwright.
  - *Benefit*: Increased automated test coverage by 60%, significantly reducing manual testing efforts.

SarvM.AI System Private Limited 🔗
DATA SCIENCE INTERN | 07/2022 – 01/2023

- **Recommendation Algorithms:** Analyzed and optimized recommendation algorithms for food commodities.

- **Delivery Optimization:** Determined the proper order in which packages should be allocated for delivery. Implemented K-Means clustering to group delivery points based on geographical proximity, and utilized the 2-Opt algorithm to iteratively improve delivery routes and find the **most efficient routes for deliveries**, minimizing the total travel distance and re-ordering the delivery data according to the optimized routes.

- **Market Basket Analysis:** Identified relationships between items in transactions and constructed recommendations based on these relationships. Implemented the recommendations, leading to a **30%** increase in sales from related items.

- **Customer Order Data Analysis:** Predicted **user re-orders** by employing machine learning models like: Logistic Regression, Random Forest, XGBoost Classifier, and LightGBM Classifier. Achieved a re-order prediction accuracy of approx. **96% w**ith **XGBoost Classifier** model. Deployed the model using **Flask**, enabling better inventory management and customer satisfaction.

- **Item Pricing Prediction:** Predicted **prices** of food items in India using historical price data for appropriate item pricing by employing machine learning models like: Linear Regression, Random Forest Regressor, and XGBoost Regressor. Achieved an accuracy of approx. **98%** with **XGBoost Regressor** model.

Motlay Innovation Pvt Ltd 🔗
DATA SCIENCE INTERN | 05/2022 – 07/2022

- **Web Scraping:** Worked on Web Scraping in Python to extract data from various websites utilizing libraries such as BeautifulSoup, ensuring clean and structured datasets for analysis.

- **Automated Data Extraction:** Developed Python scripts to automate data extraction from Government ID cards (like Voter-ID card, Aadhar card, PAN card) using **OpenCV OCR**, and stored the extracted information for further use.

- **Company Data Analysis:** Analyzed data using **SQL** queries to gain insights into company sales statistics. Created an informative dashboard on Power BI for providing quick sales insights to support data-driven decision making.

- **Report Generation:** Worked on generating insightful reports and visualizations using **Power BI**.

PROJECTS

- **Heart Disease Prediction site (**Website, Source code**)**

    - Applied Machine Learning models: Logistic Regression, SVM, Random Forest Classifier, XGBoost Classifier, LightGBM Classifier, and Ensemble Models to predict if a person is affected by a heart problem or not. Utilized **RandomizedSearchCV** for hyperparameter tuning and achieved an accuracy of approx. **87%** with **XGBoost**/**LightGBM Classifier** models.

- **Item Pricing Prediction (**Source code**)**

    - Applied Machine Learning models: Linear Regression, Random Forest Regressor, and XGBoost Regressor to predict prices of food items in India using historical price data for appropriate item pricing. Utilized **RandomizedSearchCV** for hyperparameter tuning and achieved an accuracy of approx. **98%** with **XGBoost Regressor** model.

ACHIEVEMENTS

- **Optum Financial AI Hackathon | 22/07/2024 – 02/08/2024**

    - Worked on a Chat Assistant prototype to assist support representatives in the card re-issuance process for MICROSOFT.

- Received 3 **Diamond Awards** (highest rated award in Optum) for exceptional performance. 🔗