

RAHUL DATTA

Full Stack Software Engineer | Gen AI Architect

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Accomplished Full-Stack Software Engineer with 14+ years of diverse experience in software engineering, web development, and cloud-based solutions. Proficient in modern web frameworks such as React.js, Next.js, and backend development using Python and Node.js. Adept at designing scalable, dynamic, and SEO-optimized web applications, complemented by expertise in DevOps, CI/CD pipelines, and cloud platforms. Skilled in leveraging advanced machine learning, deep learning, and Gen AI including Retrieval Augmented Generation to deliver data-centric, innovative solutions. Actively seeking a Full-Stack Developer role to contribute technical leadership and creativity in building transformative digital solutions.

SKILLS

Frontend :	React.js, Next.js, JavaScript, HTML, CSS, Tailwind CSS, Redux, and React Query for building dynamic and SEO-optimized web applications
Backend :	Python, Node.js (TypeScript), Redis, Kafka, BullMQ, SQS, WebSockets, event-driven architectures, RESTful APIs, GraphQL, SAP ABAP on HANA, SAP BTP
DevOps (CI-CD) & Cloud :	Docker, Kubernetes, Jenkins, GitHub Actions, Linux, AWS
Tools :	VS Code, Jupyter Lab
Databases / Data warehouse :	MySQL, PostgreSQL, Snowflake, BigQuery
ML & AI :	Machine Learning, Deep Learning, NLP, Computer Vision, Reinforcement Learning, Feature Engineering, Anomaly Detection, Transformers, LLM Integration, Generative AI
Analysis & Visualization :	SQL, Matplotlib, Seaborn, Plotly, Pandas
Packages & Frameworks :	Django, Flask, FastAPI, Scipy, Statsmodels

PROFESSIONAL EXPERIENCE

November 2021 Present	Gen AI Architect, LAM RESEARCH, India <ul style="list-style-type: none">> Developed full-stack LLM-Powered Chatbot for Semiconductor Supply Chain Management : Architected and implemented a full-stack LLM-powered chatbot for semiconductor supply chain management, utilizing React.js for dynamic user interfaces and Python (FastAPI) for backend services. Integrated Retrieval-Augmented Generation (RAG) and Reasoning and Action (ReAct) frameworks, enabling real-time search engine interaction.> Scalable APIs for ML Integration and Business Efficiency : Developed scalable APIs for seamless integration between machine learning models and business applications, enhancing operational decision-making capabilities and achieving a 20% reduction in equipment failures. <div>Python Express/Node.js ReAct.js Docker Kubernetes AWS Redis RabbitMQ Machine Learning</div> <div>Deep Learning Gen AI LLM RAG Langchain SQL NoSQL</div>
June 2020 November 2021	Solutions Architect, IBM, India <ul style="list-style-type: none">> Led the CANADA SAAQ S4 HANA Implementation as Techno-functional Consultant : Developed and managed SAP Fiori elements in SAP BTP, driving digital transformation for IBM Cloud. Implemented the ABAP RESTful Programming Model, leading development and deployment of custom Fiori apps using OData services and CDS for ABAP 7.5 <div>SQL ABAP HANA Sap SD Sap MM</div>
October 2014 June 2020	Tech Lead, ACCENTURE, UK & India <ul style="list-style-type: none">> Redesigned UK Post Office Payroll System : Led ABAP S/4HANA payroll revamp for UK Post Office in six months during a 10-month London assignment> Led S/4HANA Implementation for Petronas Italy : Techno-Functional lead in SAP ABAP and Materials Management (MM), ensuring smooth go-live and effective issue resolution. Demonstrated strong leadership and problem-solving skills in a high-stakes environment> Led S/4HANA Projects with International Expertise : Managed 3 end-to-end migrations and 4 green-field implementations as a solutions architect and lead developer across Europe <div>SQL S/4HANA Migrations Greenfield Implementations</div>

March 2011 September 2014	Systems Engineer, TATA CONSULTANCY SERVICES, India > Contributed to Major SAP Projects : Key contributor to two SAP greenfield implementations; awarded Best Member. Upgraded NetWeaver 7.3 and enhanced Webdynpro for ABB Norway's LSO Portal, developing nine custom components and managing FPM configuration end-to-end System Upgrades Custom Web Applications
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EDUCATION

August 2006 – March 2010	Bachelor of Technology, Information Technology, West Bengal University of Technology, India, DGPA : 8.12/10
February 2022 March 2023	Online Post Graduate Program in Artificial Intelligence (AI) & Machine Learning (ML), PURDUE UNIVERSITY, USA, GPA : A++ > Course Modules : Python, SQL, Power BI, Excel, Product Analytics, Probability & Statistics, Machine Learning, Neural Network, Deep Learning, Text Analytics, MLOps, NLP, Computer Vision CNN LSTM Data Augmentation Azure OOPS Functional Programming Hypothesis Testing A/B testing Projects

CERTIFICATIONS

1. Google Cloud Big Data and Machine Learning Fundamentals, Google
2. Machine Learning Engineering for Production (MLOps) Specialization, Google
3. PyTorch for Deep Learning in 2023 : Zero to Mastery, Udemy
4. Python for Data Science, Harvard University
5. Natural Language Processing : Deeplearning.ai

BUSINESS CASE STUDIES/ PROJECTS :

1. Face Detection and Emotion Recognition with TensorFlow : Implemented face detection and emotion recognition using neural networks in TensorFlow for the Capstone project
2. Kidney Stone Prediction : Binary classification using a tabular dataset
3. Enzyme Substrate Classification : Multi-label classification with biochemical data
4. Crab Age Prediction : Regression analysis on a biological dataset
5. Vector Borne Disease Classification : Classification task with epidemiological data
6. Machine Failure Prediction : Binary classification for predicting machine failures
7. Pulsar Detection : Binary classification with astronomical data
8. Media Campaign Cost Prediction : Regression on marketing campaign data
9. Software Defects Prediction : Binary classification using software metrics
10. CO2 Emissions Prediction : Predicting emissions for Rwanda using regression

AWARDS & SCHOLARSHIPS

1. Received the Best Member of the ABB account award at TCS in both 2012 and 2013
2. Received the Accenture Celebrates Excellence (ACE) award in the UK in 2018 for successfully redesigning the UK Post Office payroll engine within six months during a 10-month onsite assignment in London with Accenture

COMPETENCE

- > **Project management** : Successfully managed and delivered multiple ML and SAP projects simultaneously, consistently meeting deadlines and achieving objectives
- > **Communication** : Excellent verbal communication, presentation, and writing skills, effectively conveying complex technical concepts to diverse audiences
- > **Additional Skills** : Innovative and driven with a strong analytical mindset; adept at both independent work and collaborative team environments

REFERENCES

Available upon request