Atul Gupta

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SUMMARY

Dynamic **Analyst** with 5 years of experience in advanced data analysis, software engineering, and cloud solutions. Seeking to leverage expertise in data analysis, machine learning, and AWS for impactful outcomes through data-driven strategies and efficient cloud deployments. Open to relocation anywhere in the US and available for immediate joining.

CERTIFICATIONS

AWS Certified Machine Learning Engineer Associate

Amazon Web Services • 2025

• Validates technical ability in implementing ML workloads in production and operationalizing them.

AWS Certified Solutions Architect Associate

Amazon Web Services • 2024

• Validates expertise in designing scalable, secure, and cost-effective AWS cloud architectures, including high availability, fault tolerance, and performance optimization.

AWS Certified AI Practitioner

Amazon Web Services • 2024

• Validates in-demand knowledge of artificial intelligence (AI), machine learning (ML), and generative AI concepts and use cases.

PROJECTS

RAG AI Personal Assistant

Independent • tinyurl.com/mr4xrtyz

• A Generative AI powered RAG chatbot that captures a user's profile and talks to a hiring professional presenting their candidature. **DO NOT READ MY RESUME. Talk to it**.
• Applies NLP techniques like semantic search, contextual synonym augmentation, vectorization, vector embeddings, FAISS indexing, prompt engineering with intent determination, cosine similarity search, retrieval augmented generation via LLM.
• Uses AWS Elastic Beanstalk, AWS Bedrock, S3, EC2, Python, HTML, CSS, Javascript, Nginx, gunicorn, Anthropic Claude-v2.

Credit score classification

Independent • tinyurl.com/ydtrxbcu

• An **End-to-End AI product** on credit score data with 20 features predicting credit score category between Good, Standard, and Poor.
• Data is cleaned and normalized using **Pandas**, **NumPy**, **aggregate functions**, imputation, and predictive modeling.
• The model uses a bagging classifier with 86% precision and recall and is deployed on **AWS SageMaker** Endpoint.
• Served via a **Flask** application on **NGINX** server deployed on **AWS Elastic Beanstalk** running a t3 micro instance.
• Product is live and ready to use via the link. (Try it yourself).

EXPERIENCE

Analyst

Accenture (client: Hilton Hotels)   January 2021 -   July 2022

• Led end-to-end **cloud migration** of an on-premises Hilton Property Management System (PMS) on AWS using **EC2** (Windows Server), **AWS RDS for SQL Server**, **S3**, Elastic Load Balancing, and Auto Scaling to maintain system stability and minimize hardware maintenance during COVID.
• Analyzed **10+ TB** of transactional and guest behavior data using **PySpark** during COVID (North America), developing **predictive machine learning models** with 80% accuracy to forecast customer reservations and optimize inventory management during global disruptions.
• Wrote **CloudFormation** + **PowerShell** scripts to automate Amazon Windows Server re-builds and reduce dependency on third parties in setting up new environments by 60%.
• Architected a **scalable data warehouse** on **Amazon Redshift** to unify transactional, reservation, and third-party data, enabling cross-functional teams to access the data securely and reliably.
• Leveraged **natural language processing (NLP)** techniques to analyze guest reviews and social media feedback in the North America region, helping executives monitor various hotels' key performance indicators.

• Created **machine learning** models (using data gathered from patch failures in **AWS RDS**, reported incidents in **Service Now**, and **hotfixes** deployed over time) to analyze patterns in reported hotel incidents and equipment failures across 5,000+ properties.

Associate

Accenture (client: Hilton Hotels)   **January 2019 - December 2020**

• Led and implemented **multiple Six Sigma Lean and Yellow Belt projects**, integrating **ServiceNow, MS SQL Server, PowerShell, and AWS** to streamline business processes, eliminate bottlenecks, and accelerate critical incident resolution by 50%.
• **Automated** patch deployment for Hilton's OnQ PMS across 6,000+ databases using **AWS lambda**, **MS SQL Server,** and **EC2** reducing manual effort by 80% and ensuring 99.9% uptime during critical booking periods.
• Created interactive dashboards (**SNOW, Tableau**) for executive stakeholders, translating complex datasets into actionable insights for hospitality service enhancements.
• Resolved 150+ platform issues annually, from scripting errors to integration failures, achieving a 98% end-user satisfaction rate through **SLA**-driven support.
• Implemented **cost-optimized cloud storage** strategies on **AWS S3**, **RDS**, and **Redshift** cutting annual infrastructure expenses by 22% while maintaining 99.9% uptime for mission-critical hotel operations.
• Migrated Hilton's legacy reservation analytics to a **serverless AWS architecture** (**S3**, **Athena**, **Glue**), enabling effective tracking of KPIs.

Developer

Tech9logy Creators (Startup; clients: Cosmo Films and Tasty Tweets)   **June 2017 - December 2018**

• Designed **proof of concepts** for Cosmo Films with **Python** and **AWS**, demonstrating the feasibility of managed AWS architecture.
• Developed **RESTful APIs** (AWS API Gateway) to connect the Cosmo Films' legacy Budgets and Assets Portal system with new portal, improving data sync efficiency by 70%.
• Built a supply chain analytics dashboard (**AWS Postgres**, **Tableau**) for Cosmo Films, visualizing client's inventory metrics for executives.
• Deployed Elastic Load Balancing for Tasty Tweets' website, making the system more reliable and traffic spikes friendly.
• Built and launched a custom e-commerce platform for Tasty Tweets using **Node** and **React**, enabling the business to sale and deliver online.

EDUCATION

Master of Science in Computer Science

Stevens Institute of Technology • Hoboken, New Jersey • 2024 • 3.96

• Provost Master's scholarship awardee.
• **Coursework**: Deep Learning, Machine Learning, Agile Development, Big Data, Data Mining, Data Structures, Algorithms.

SKILLS

Machine Learning: **Predictive Modeling** (Statistical Analysis, Numpy, Pandas, Scikit-Learn, EDA, Data processing, MapReduce), **Deep Learning** (Tensorflow, Neural networks, Anomaly detection, recommendation systems, LSTMs), **NLP** (Semantic Search, Cosine Similarity, KeyBERT, torch) **Generative AI** (AWS Bedrock, Vectorization, PineCone, Vector databases, indexing, Prompt Engineering, RAG, fine-tuning)

Big Data & Analytics: PySpark, AWS Athena, Data Warehousing (Redshift), Real-time Dashboards (Tableau)

Cloud & DevOps: AWS (EC2, S3, IAM, Lambda, SageMaker, Glue, CloudFormation), Serverless Architecture, CI/CD, Docker, Kubernetes, Service Now (SNOW), PowerShell, Bash scripting, Git, Gunicorn, Linux, Nginx, networking

Databases & Tools: MS SQL Server, AWS RDS, MongoDB, ETL/ELT Pipelines, query design, optimization, pandas, transactions, T-SQL, Replication and high availability, backup and restore.

Domain expertise: Hospitality Analytics (Guest Behavior Analysis, Occupancy Forecasting, Dynamic Pricing, Loyalty Program Optimization), **Cloud Migration (**Legacy System Modernization (Windows, SQL Server → AWS), Cost-Optimized Architecture, Hybrid Cloud Solutions), **Automation (**Patch Deployment, Database Maintenance, Compliance Reporting, CI/CD Pipelines, Shell Scripting)

Languages: SQL, Python, Bash, PowerShell

Soft Skills: Cross-Functional Collaboration, Stakeholder Communication, Agile Methodologies, Disaster Recovery Planning

AWARDS & HONORS

TechStar 2022

Accenture • 2022

• This award recognizes the top 1% of the people in Accenture's Technology business and is issued once a year.