

# ATUL GUPTA

Jersey City, NJ

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## Technical Skills

**Machine Learning:** Predictive Modeling (causal inference, time-series, classification, regression), Deep Learning (Neural networks, CNNs, ANN, RNNs, LSTM, GANs, Transformers), Bayesian decision theory, NLP (vector embeddings, BERT keyword augmentation, semantic search, Pinecone), Generative AI (RAG, prompt engineering, fine-tuning), Chatbot creation

**Python:** pandas, numpy, matplotlib, seaborn, scikit-learn, tensorflow, pytorch, Xgboost, Langchain, boto3, Flask, Django

**Cloud:** Amazon Web Services, AWS, EC2, Elastic Beanstalk, S3, Lambda, IAM security, Sagemaker, bedrock, serverless architecture, EKS, AWS RDS (SQL Server, PostgreSQL), MLOps, Azure, auto-scaling, Athena, DynamoDB, Redshift, Azure, Azure Functions, Azure Machine Learning, GCP, Vertex AI, ETL pipelines, CI/CD

**SQL:** MS SQL Server, T-SQL, SSRS, SSIS, SSMS, transactions, MongoDB, query design, optimization, replication, RAID, PostgreSQL, NoSQL databases

**DevOps:** containerization, orchestration, Docker, Kubernetes, Service Now, PowerShell, Bash scripting, Git, Linux, certificate management, windows servers

## Projects

### RAG AI Personal Assistant | [https://github.com/atulgupta002/Personal\\_Assistant\\_RAG\\_AI](https://github.com/atulgupta002/Personal_Assistant_RAG_AI)

- A Generative AI powered RAG AI that facilitates hiring professionals to learn interactively about a candidate's profile.
- Created an end-to-end AI using NLP, vector search, Retrieval Augmented Generation (RAG), LLM, fine-tuning, and prompt engineering.
- Tools: sentence transformers, FAISS indexing, BERT, Python (scikit-learn, torch, numpy, Flask), HTML5, CSS, Javascript, RestAPIs, AWS Elastic Beanstalk, Bedrock, EC2, S3, Linux, Nginx.

### Credit Score Prediction | <https://github.com/atulgupta002/Credit-Score-Prediction>

- A predictive model on credit score data with 20 features predicting credit score category between Good, Standard, and Poor.
- Created an end-to-end machine learning product using data analytics, data processing, exploratory data analysis, ETL, feature engineering, statistical analysis, encoding, data modeling, and cloud.
- Tools: Python (pandas, numpy, matplotlib, seaborn, Xgboost, Flask), AWS Sagemaker, EC2, Elastic Beanstalk, Linux, Nginx, Unicorn.

## Experience

### Brightmind Enrichment, Jersey City, NJ

Jul 2024 - Present

#### Data Analyst, Part-time

- Understand business and technology needs to streamline data collection processes
- Perform data manipulation, data cleansing, and exploratory/statistical analysis for business decisions by using SQL, R and SAS
- Uses a data driven approach to assess campaign success, develops and tracks KPI metrics, and optimizes future campaign tactics.

### Application Development Analyst

Jan 2021 – Jul 2022

#### Accenture

Gurgaon, India

- Performed end-to-end cloud migration of on-premises Hilton Property Management System (PMS) to a secure AWS environment (RDS for SQL Server, EC2 S3, Lambda, IAM), during COVID-19 disruptions.
- Engineered cloud-native ETL and ELT pipelines to analyze 10+ terabytes of transactional and guest behavior data from Amazon Redshift.
- Developed an ensemble ML model (XGBoost + LSTM) with 80% accuracy to forecast reservations enabling dynamic inventory allocation reducing costs and making staffing more efficient during COVID-19 disruption.
- Created guest churn prediction program for Hilton Honors loyalty program enabling targeted marketing campaigns to reduce churn. Integrated data from various sources and created an XGBoost model on 2+ years of historical data.
- Deployed the churn model on Sagemaker, set up batch re-training via sagemaker pipelines, and set up alerts to notify CRM teams if the churn probability exceeded a threshold.
- Evolved the patch deployment solution by implementing new features to re-install patches, check for pre-requisites, remediate known failures, create detailed reports on installation, and notify concerned teams via emails.

## Application Development Associate

Jan 2019 – Dec 2020

### Accenture

Gurgaon, India

- Led and implemented multiple Six Sigma Lean and Yellow Belt projects, integrating ServiceNow, Python, 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+ Linux Servers worldwide via a python backend application (with shell scripting) to reduce manual effort by 80%, down-times by 90% and enforced process compliance by minimizing human errors.
- Resolved 150+ unique critical issues by understanding enterprise application architecture in-depth, conducted knowledge transfer sessions with a team of 30, and presented root cause analysis to client executives.
- Managed 6000 production database instances worldwide ensuring consistency, reliability, and durability of the data. Created new SQL stored procedures and jobs to ensure compliance with existing rules and regulations globally.
- Created interactive dashboards for executive stakeholders, integrating data from Redshift warehouse with on-premises logs and databases, to translate large and complex datasets into actionable insights for hospitality service enhancements.

## Software Developer

Jun 2017 – Dec 2018

### Tech9logy Creators

Faridabad, India

- Designed proof of concepts (PoC) for Cosmo Films with **Python** and **AWS**, demonstrating the feasibility of managed AWS architecture in improving performance and optimizing costs.
- Prototyped the PoCs on serverless AWS architecture (S3, Lambda, DynamoDB) for test runs and presented the findings to the client.
- Built and launched a custom e-commerce platform for Tasty Tweets, a local bakery, enabling them to take online orders and schedule deliveries.

## Education

**Master of Science:** Stevens Institute of Technology, Hoboken, NJ

- GPA: 3.96
- **Coursework:** Deep Learning, Machine Learning, Agile Development, Big Data, Data Mining, Data Structures, Algorithms

**Bachelor of Technology:** Vellore Institute of Technology, Vellore, India

## Certifications

### AWS Certified Machine Learning Engineer Associate ([Link](#))

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

### AWS Certified Solutions Architect Associate ([Link](#))

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

### AWS Certified AI Practitioner ([Link](#))

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