ATUL GUPTA

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Summary

Experienced AI engineer with expertise in machine learning, neural networks, AWS solution architecture and a strong background in full stack application development. With 5 years of experience in the tech industry and a solid academic foundation in Computer Science, I have deep understanding of predictive modeling, cloud architecture, DevOps, and application development.

Skills

Machine Learning	Numpy, Pandas, Scikit-learn, Keras, Tensorflow, Jupyter, matplotlib, seaborn, Pytorch, prompt engineering, Artificial neural networks, Convolutional neural networks, LSTMs, Recurrent neural networks, Attention models like autoencoders and generative adversarial networks, generative transformers
Data Analysis	Data pipelining, Data cleaning, Exploratory data analysis, Feature engineering, Integration with GenAI via AWS Bedrock, PySpark, Big data analytics, Hadoop
Cloud Computing	AWS solution architecture, EC2, VPC, RDS, DynamoDB, S3, Lambda, Edge computing, Auto scaling groups, Serverless architecture, IAM, Cognito, Logging and monitoring, RESTful APIs on API Gateway, Cost explorer
Mathematics	Bayesian decision theory, Statistical analysis, Linear/Logistic regression, clustering, graph models
Databases	MS SQL Server, Postgres, MongoDB, T-SQL, SQL profilers and debugging, schema design, query optimization
Application Development	Python, Java/J2EE, HTML5, CSS, Bootstrap, JavaScript, Web Services, decoupling and microservices architecture, Powershell scripting, Linux, Windows servers 2008 and above
Methodologies	Agile, Scrum, Design thinking, SDLC, Waterfall

Certifications

- AWS Certified Solutions Architect – Associate

Work Experience

Jan 2019 – Jul 2022
Application Developer at Accenture (client: Hilton Global)

Hilton is a full-service, multinational hospitality company that includes 7530 properties in 118 countries that was founded in 1919. As an application developer for Hilton, I worked on developing Hilton's Property Management System, OnQ PMS. The system is central to Hilton's global operations as it manages reservations, inventory, guests, housekeeping, payments, property status, brands, sub-brands, Hilton loyalty programs, data backups, report generation etc. The system needs to be available 24/7 in all Hilton locations worldwide and it needs to comply with local regulations that vary significantly around the world.

- Developed OnQ Maintenance Service (python) – a stand-alone windows service deployed on all OnQ PMS instances. The service monitored KPIs on 7000+ windows servers, generated detailed logs on the local machine and sent periodic alerts on server health
- Designed database schemas in MS SQL Server (2012 and above) for new functionalities
- Created a multi-threaded data scraper to fetch data from MS SQL Server instances worldwide
- Used the data scraper to gather large amounts of reservation data from all hotels and developed a machine learning model (random forest regression) to predict future revenue and guest bookings on monthly as well as annual basis
- Volunteered to lead the development of MasterSweep – a Powershell and python-based automation script that deployed code worldwide
- Volunteered to lead the development of 7 six-sigma yellow belt projects
- Wrote a whitepaper on the need to migrate Hilton's on-prem infrastructure to AWS cloud and presented the paper to client technology leads
- Documented critical application failures in SNOW and presented Root Cause Analysis reports to clients

Jun 2017 – Dec 2018
Software Developer at Tech9logy Creators

Tech9logy Creators is a software development and IT consulting firm based in India. It works with clients primarily from India and Australia on unique software development projects. I worked as a software developer in their backend development team.
- Created proof of concept in AWS for a Tasty Tweets, a local bakery, demonstrating the viability of finished project to the client
- Met with client teams to discuss requirements
- Refactored existing python code to improve performance by 20%
- Created detailed technical documentation of the ongoing projects to be used for future reference

Projects (View portfolio)
May 2024 – Jul 2024
QR Code Generator
      Full-stack web application built on AWS Serverless and hosted on S3 as a static website. It integrates various managed AWS services to demonstrate their inner workings and integration. Built on HTML5, CSS, JavaScript, AWS API Gateway, Lambda (python), S3, CloudWatch, and IAM (Try it out)

Sep 2023 – Dec 2023
Flight Delay Analysis
      Analysis and modeling of ten years of flight data using PySpark, Python, Jupyter, RDD. I gathered 8 gigabytes of historical flight data of major US carriers to develop a predictive model that predicts the likelihood of delays in future flights using XGBoost, random forest, logistic regression, and bagging classifiers. I also performed exploratory data analysis on the data to gather insights that are beneficial to the aviation industry (View report)

Sep 2023 – Dec 2023
Credit Score Classifier
      Multi-class categorizer to analyze and model the financial and credit data of 50k customers using Numpy, Pandas, Jupyter, Xgboost, svm, matplotlib, seaborn, and regular expressions. The project predicted credit score category (among poor, average, good) of incoming customers based on historical financial data (View project)

Jan 2023 – May 2023
Solar Collaboration
      Full-stack web application implementing a ticketing system to facilitate collaboration between various stakeholders in the end-to-end implementation of a household solar energy project. The project is built on NodeJS, MongoDB, ReactJS, HTML5, CSS, JavaScript, EJS, ExpressJS, and JSON in a scrum developmental framework (View project)

Education
Sep 2023 – May 2024	*Stevens Institute of Technology* (GPA: 3.96) Master of Science – Computer Science Coursework: Deep Learning, Machine Learning, Agile Development, Big Data, Data Mining, Data Structures, Algorithms
Jun 2013 – Jun 2017	*Vellore Institute of Technology* (GPA: 3.0) Bachelor of Technology – Electrical and Electronics Engineering

Awards
- Provost Master's Scholarship (worth $12k)
- TechStar'22 (Recognizes top 1% Accenture technology employees)
- Accenture Celebrates Excellence (Teams category)
- Pinnacle Award'22