Alka Kumari

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CAREER PROFILE

- Holds a Master's in Computer Science from Bishop's University, Quebec.
- 8+ years experience in managed file transfer solutions, transitioned from on-premise APIs to cloud-based solutions on AWS.
- Lead developer for support and automation.
- Skilled in fostering trust through collaboration amongst clients and cross-functional teams, technical root-cause analysis documentation, leading lunch and learns, architecture and design meetings, and cost & capacity negotiations with clients.
- Mentored new joiners to get assimilated with the company, project, job-role and guided their continuous development.

TECH STACK

Devops/CICD: Github • ADO • Docker
MiddleWare Tools: Java based Sterling Products (B2B Integrator **(SI)** 6.1 • File Gateway • Secure proxy • Gentran
Database: MYSQL • PostgreSQL • DynamoDB • RedShift
Protocols: SFTP • AS2• Connect Direct
Shell Scripting: Bash • C Shell
AWS: IAM •CloudWatch• EC2• Lambda• S3• NFS • Event Bridge• Step Function• Cloud Formation • RDS • SageMaker
Python Libraries: Boto3•Flask•Django•Pandas•Numpy•re•Requests•matplotlib•PyTorch•TensorFlow•SciKitLearn•NLTK
Data Analysis and Visualizations: Splunk•QuickSight

EXPERIENCE

ACCENTURE | Tech Team Lead
Domain: Oil and Gas
Mar 2019 – Dec 2022 | Bengaluru India

- **Spearheaded S3 Integration with SI generating revenue increment of 23%**: Led and implemented Proof of Concept, architecture design (microservices, modular and event-driven). **Exposed AWS Lambda as an API** consumed by the application, leveraging API Gateway, S3 triggers, Step Functions, IAM, CloudWatch, EventBridge and Redshift. **Delivered a Minimum Viable Product within a month**, securing business buy-in through successful testing and migration using AWS CLI and boto3.
- **Reduction in processing time through SQL/No SQL query optimization:** Identified and optimized long running SQL queries in Amazon RDS. Mitigated SQL blocking and addressed space alert issues in Amazon RDS. Implemented Redshift for large-scale data processing, streamlining queries and improving overall database performance. Conducted shrink activities resulting in a 20% reduction in storage costs and increment in database performance.
- **1K+ pounds cost saving by AWS resource management:** Created and implemented policies to resize/terminate action for AWS compute & storage resources. Optimized the usage of Redshift and SQL/NoSQL databases in line with cost-saving strategies, leading to effective resource management. Integrated this with CI/CD pipelines to automate the process, ensuring efficient deployment and resource utilization.
- **Minimized recovery time objective by 60% through Disaster Recovery Planning:** Led DR drills for EC2 instances and refined the backup and start up plan. Led DR drills for EC2 instances and refined the backup and startup plan, leveraging AWS CloudFormation and Redshift snapshots to ensure rapid recovery. Conducted regular client and stakeholder interactions to update on DR planning and performance, ensuring alignment with business continuity requirements.
- **30-35% reduction in support ticket volume:** Integrated Splunk with SI enabling users to visualize complete workflow and real-time file transfer information along-with workflow config details.
- **25% reduction in EC2 downtime through streamlined Patch Management:** Orchestrated RHEL patching for EC2 instances, including snapshots, backups, reboots, and health checks, which improved system reliability.
- **First response time reduced by 50% through proactive monitoring with CloudWatch:** Configured custom S3 and lambda Cloud Watch alarms and leveraged in-house metrics such as EC2 CPU utilization, disk I/O, network traffic, as well as RDS metrics like CPU utilization, free storage space, and replication lag.
- **5+ hours reduction using custom reporting for business users:** Developed weekly average trend reports integrating Splunk with CW for file count and size, lambda concurrency, API hits, along with ingress and egress traffic visualization.
- **Enhanced Network Flexibility with IP Range Expansion:** Updated Security Group rules and Network ACLs to allow a wider range of IP addresses, ensuring 100% compliance.
- **97% reduction in security alarms through Vulnerability Management:** Resolved security vulnerabilities proactively, strengthening the overall security score of the application and preventing potential breaches.

IBM INDIA PVT. LTD. | Senior System Engineer
Domain: Retail
Aug 2014 – Feb 2019 | Bengaluru India

- **Analyzing and translating business requirements to technical requirements:** Creating GAP documents from client and 3rd party conversations.
- **Monitoring everyday transactions** and maintaining system health.
- **Implementing complex EDI Gentran onboarding projects and maps:** Implementing complex EDI Gentran on boarding projects along with creating and enhancing maps of EDI transactions like 850, 810, 856, 860, 820, 824 etc for versions like 004010, 005010, 004010VICS and other EDIFACT transactions like ORDERS, ORDRSP, INVOIC, DESADV etc. for versions like D93A and D96A; Mapping between of EDI, flat file, IDOC formats.
- **Creating and understanding unix bash and korn shell scripts** to implement several logic.
- **Implemented DML and DDL SQL statements** on MSSQL to perform everyday tasks.

PROJECTS AND RESEARCH:

- **Sentiment analysis of E-Commerce Product Reviews**:
  - Predicts overall sentiment of product reviews using BERT. Dataset - Amazon review corpus, comprising 82 million reviews.
  - Followed the CRISP-DM methodology, including data cleaning, tokenization, and modelling.
  - Visualization techniques: Word clouds, Time series analysis of word usage.
- **Customer Review Corpus for Sarcasm Detection**:
  - The project labelled the datasets using supervised learning.
  - Literature review performed to compare different approaches for sentiment analysis with sarcasm detection.
- **2nd Place in Hackathon: Loan Default Prediction**:
  - Applied Exploratory Data Analysis (EDA) and utilized CatBoost to predict the probability of customer loan defaults.
  - Dataset contained customer profiles through bank transaction data and training a model on 7,500 labeled instances.
  - Judging Criteria: Area Under the Curve (AUC)
- **On going project: Hate speech using a hybrid LSTM-GRU-RNN model**
  - Dataset - Davidson hate speech corpus, containing labeled tweets across three classes: hate speech, offensive language, and neither.
  - Embedding experimented on: GLoVe, NV-embed-V2. Visualization techniques: Confusion matrices, Class distribution histograms, and AUC-ROC curves for model performance evaluation.
  - Trained and deployed the model using AWS SageMaker, leveraging built-in algorithms for distributed training and model optimization.

EDUCATION

BISHOP'S UNIVERSITY
MSc in Computer Science

West Bengal University of Technology
Bachelor's in technology (Computer Science)
West Bengal, India

CERTIFICATION

- Sustainability and ESG Certification for Oil and Gas
- AWS Certified Developer – Associate
- Microsoft Certified: Azure Administrator Associate

NOTABLE ACHIEVEMENTS

Masters
- Elected as EDI (Equity Diversity & Inclusivity) representative for Winter term 2023
- Won 2nd place in intra university Hackathon. Topic: Detecting loan defaulters based on bank transactions

Accenture
- Presented with A.C.E. award in Accenture FY'19 for innovative solution of creating a dashboard using Splunk.
- Internal recognition: Lead With Excellence, Confidence and Humility - Sterling BAU Lead

IBM
- Received Manager's choice award on multiple occasions (9 times)
- Have been placed in the top tier of contributors of the organization at all the yearly reviews in IBM.

Undergraduate
- Was co-organiser of TechFest called Technix'14
- Built Technix'14 website

School
- Served as captain of my house for a year. Won the school cup for my house after 12 years.