SARBOTTAM THAPA MAGAR

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https://mattobad.github.io/

SUMMARY

AWS Certified professional with versatile IT consulting experience across Solution Architecture, Software Development, Cloud Development, and Data Science Analysis. Experienced in designing and delivering innovative solutions using AWS services and cloud technologies. Proficient in Python, Java, and JavaScript, with expertise in database design, cloud-native development, and advanced data analytics. Demonstrated ability to apply machine learning, statistical analysis, and data visualization to solve business problems. Skilled collaborator with a proven track record of working in fast-paced environments, ensuring project success through seamless role transitions and effective communication.

EXPERIENCE

Software Developer   Aug 2022 – Present

Barrington Edge

Built a REST API using Serverless Architecture with features for product traceability, climate impact evaluation, and supply chain carbon monitoring.

Responsibilities:
- Architected and provisioned AWS resources for development, staging, demo, and production environments, ensuring optimal performance and reliability.
- Designed and developed API with serverless architecture using AWS services, including API Gateway, Lambda, and Amazon RDS, resulting in improved scalability and cost-effectiveness.
- Collaborated with cross-functional teams to translate business requirements into technical specifications and cost estimation.
- Collaborated with the frontend development team to integrate data from the API into the application's user interface, ensuring data consistency and accuracy.
- Created and maintained SQL queries and database schema design to manage user data and application functionality.
- Participated in daily stand-up meetings and used JIRA to keep track of project tasks, bugs, and issues.
- Led knowledge transfer meetings to assist new team members in understanding the existing system's design and code repository.
- Oversaw the management of IAM users, assigning permissions and access to AWS resources for developers and business analysts.
- Used the boto3 library to automate and accelerate Serverless architecture deployments, resulting in a significant reduction in deployment time.

Data Science Analyst   Aug 2021 – Aug 2022

Halifax Regional Municipality

Involved in end-to-end product development from problem definition, and design to deployment for a variety of Municipal services.

Responsibilities:
- Identifying business questions and testing hypotheses using research & jurisdiction scans.
- Propose predictive analytic capabilities in-house through research, development, and prototyping.
- Extracting, cleaning and combining data from various sources like public API's and Corporate Data Warehouse using SQL queries and Python scripts as required.

PROFILE

LinkedIn:
http://bit.ly/STM_l
GitHub:
https://github.com/Mattobad/

TECHNICAL SKILLS

Programming Languages:
Python | Java | JavaScript

Data Science:
Data Analysis (NumPy, Pandas)
Data Visualization (Matplotlib, Seaborn, Plotly)
BI (Tableau)
Supervised learning (Linear Regression, Logistic Regression, Random Forest etc.)
Unsupervised Learning (Clustering, Kmeans)
Deep Learning (TensorFlow-Keras, Image Classification)
NLP (NLTK, Spacy, Genism, Sentiment Analysis, Topic modeling, Transformers, Haystack framework)
Model Deployment (Flask-API, Serverless API)
Other (Structured, Semi-structured & Unstructured data types, Time Series Analysis, Dash)

Cloud:
AWS (Serverless, S3, Lambda, EC2, IAM, Amplify, Cognito, Route53, AMB, Elasticsearch, Comprehend, AWS Machine Learning Services)
Azure (Azure Blob Storage, Container)

- Presented insights on Municipalities building energy and emission trends by following visualization best practices through the dashboard using Dash – Web programming framework.
- Built a time series model to predict daily solar prediction with an accuracy of 93.5% from 5 min interval micro-inverter data points.
- Built Citizen Twitter analytics app using Dash to understand citizens views on HRM strategies related to Climate change through storytelling with incorporation of sentiment analysis, word cloud and topic modeling.
- Automate daily twitter data collection using Databricks.
- Communicating the result to technical and non-technical audiences.

Data Science Fellow   Dec 2020 – July 2021
SharpestMinds

Built a Full-Stack Data Science product that can predict a used vehicle's price as a point estimate as well as a range based on its characteristics.

Responsibilities:
- Worked with a scraped dataset from Kaggle containing "458,213 raw data points".
- Built Gradient Boosting Tree-based model with a point estimation accuracy of 89.52% and an MAE 2,527.49 dollars.
- Implemented Quantile model Prediction for the vehicle price range.
- Built Serverless RESTful API for serving the model with AWS using Zappa.
- Used GitHub Actions for automating CI/CD pipeline and pytest for a test suite.
- Collaborating through a mentorship with a Senior Machine Learning Engineer at DTN.

Research Intern   May 2019 – Oct 2019
GreyLit Inc.

Built multimedia search engine using AWS Serverless architecture.

Responsibilities:
- Developed front-end as well as back-end with serverless architecture and performed quality assurance.
- Built a microservices with lambda to execute the pipeline for text extraction from different multimedia and document files using AWS Machine Learning services (Textract, Transcription, Transcribe) which uses Comprehend & Elasticsearch to index the documents stored in S3 Bucket.
- Tested the whole system with around 1GB of data consisting of different documents (images, docs, pdfs) and multimedia files (video & audio).

EDUCATION

MSc. In Computing & Data Analytics   Aug 2018 – May 2020
Saint Mary's University   Halifax, NS, Canada

Bachelors in computer engineering   Dec 2011 – Dec 2015
Tribhuvan University   Kathmandu, Nepal

CERTIFICATION

AWS Certified Solutions Architect – Associate   Oct 2023 – Oct 2026

Data Scientist in Python – Dataquest (MOOCs)   Feb 2021

Others:
SQL |Bash | Docker | Git | GitHub Actions
Operating System:
Windows | Linux | Unix

AWARDS & ACHIEVEMENTS
Innovation Challenge Halifax 2019, Sept2019
Finalist- Ocean Category

Saint Mary's University David Sobeys Annual Retail Hackathon, April-2019
Saint Mary's University (Runner up)

NS Open Data Contest, March 2019
Dalhousie University (Second Position