Sabin Adhikari
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 github | linkedin

EDUCATION

Masters of Science in Computer Science   **Aug 2023 - Mar 2025**

University of South Dakota   *Vermillion, SD*

SKILLS

Programming Languages	Python | Java | SQL | MySQL, | PostgreSQL | Bash
Technologies	Azure (Data Factory) | AWS (EC2, S3, Lambda, Glue), | GCP (BigQuery) | Airflow
Data Tools	PySpark | Databricks | Tableau | Looker Studio
DevOps & Other Tools	Docker | Git | Linux | Prometheus | Grafana | Terraform | Pulumi

EXPERIENCE

BCAMP   **May 2024 - July 2024**

Data AI Engineer Apprentice as Cloud Infrastructure Engineer   *Remote*

- Designed and implemented cloud infrastructure architecture to deploy resources across AWS, GCP, and Microsoft Azure using Pulumi as Infrastructure as Code (IaC). Automated the provisioning and management of cloud resources, ensuring scalability, reliability, and cost- efficiency.
- Collaborated with cross-functional teams to integrate cloud infrastructure with data pipelines and AI/ML workflows.

University of South Dakota   **Aug 2024 - Dec 2024**

Graduate AI Researcher   *Vermillion, SD*

- Utilized Mamba architecture to analyze financial data, improving prediction accuracy and performance.
- Conducted research on GPU clusters to compare training time and memory usage between Transformer and Mamba architectures.
- Gathered financial data, performed data analysis, and preprocessed datasets for model training.

Investment Company   **Jan 2024 - May 2024**

Blockchain Engineer Intern   *Sioux Falls, SD*

- Created AWS EC2 instances to run Blockchain nodes and incorporated bash scripts for node management.
- Implemented monitoring solutions using Prometheus and Grafana, achieving real-time performance visualization that improved incident response times by 25% across all nodes.
- Coordinated with a cross-functional IT team to establish robust security protocols for Blockchain services deployment, achieving a 100% compliance rate with industry standards and reducing vulnerability risks by approximately 60

NOTABLE PROJECTS

Uber Data Analytics   **Aug 2024**

ETL Pipeline Development   *Vermillion, SD*

- Designed and implemented an end-to-end ETL pipeline using Mage-AI to extract data from GCP Bucket, transform it using Python, and load it into BigQuery for analysis.
- Utilized dimensional modeling techniques to create fact and dimension tables, enabling efficient querying and reporting.
- Built interactive dashboards in Looker Studio to visualize key metrics such as trip duration, revenue, and driver performance, providing actionable insights for stakeholders.

Sales Data Analysis   **Sep 2024 - Oct 2024**

Data Engineering Project   *Vermillion, SD*

- Loaded sales data from CSV files into Python using Pandas, cleaned and preprocessed the data by handling missing values and removing duplicates.
- Performed exploratory data analysis (EDA) to identify trends and patterns in sales data.
- Wrote SQL queries to answer business questions such as total revenue, top-selling products, and sales performance by region.
- Exported the processed data into a PostgreSQL database for further analysis and reporting.

Financial Inclusion in Africa   **Jan 2023 - Mar 2023**

Data Classification Project   *Vermillion, SD*

- Developed a machine learning model to predict the likelihood of individuals having a bank account using a dataset from Zindi, achieving an F1-score of 0.85.
- Addressed class imbalance using the SMOTE oversampling technique and evaluated models using precision, recall, and F1-score.
- Trained and compared multiple models, including Logistic Regression, Random Forest, and XGBoost, to identify the best-performing algorithm for the task.

PUBLICATIONS

- **Sabin Adhikari**, "An Efficient Approach for Predicting the State of Financial Inclusion by Addressing Class Imbalance using the Oversampling Technique," *2023 International Conference of Computer Science and Engineering (ICCSEA)*, Greate, SD.