



Data Architecture and Data Engineering

Overview

The Data Architecture and Data Engineering (DA&DE) is a vital component of our organization, tasked with the responsibility of ensuring that the company's data infrastructure is robust, scalable, and optimized. They focus on designing, constructing, integrating, and maintaining the entire data pipeline for maximum efficiency and integrity.

Mission

To empower the organization with streamlined data processes, reliable infrastructure, and advanced analytics capabilities, while ensuring data privacy and security.

Responsibilities

1. Data Architecture:

- Design and blueprint optimal data management systems.
- Develop data models that align with business processes and objectives.
- Set standards for data quality, privacy, and security.

2. Infrastructure & Data Pipeline Development:

- Develop, test, and maintain architectures like databases, data lakes, and large-scale processing systems.
- Construct, maintain, and optimize data pipelines to ensure smooth data flow across the organization.

3. Real-time Data Processing:

- Handle real-time data processing needs, ensuring timely insights and actions.

4. Optimization & Scalability:

- Regularly review and fine-tune the data architecture for performance.
- Ensure that the infrastructure scales with the growing data needs of the organization.

5. Collaboration:

- Partner with data scientists, analysts, and other business units to meet their data requirements.
 - Provide technical guidance and expertise.
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Group Members

1. Data Architects:

- Role: Blueprint and design the overarching data structure and flow.
- Key Skills: Data modeling, database design, data governance and understanding of modern data stack tools.



@Thierry Krumeich

Location: **Strasbourg, France**

Language: **English, French**

Role: **Principal Data Architect**

Fav Quote: **When one tries continuously, one ends up succeeding. Thus, the more one fails, the greater the chance that it will work.**



@Indranil Konar

Location: **Atlanta, GA**

Language: **English, Hindi & Bengali**

Role: **Principal Data Architect**

2. Data Engineers:

- Role: Build and maintain the infrastructure for data generation, conversion, and storage.
- Key Skills: Programming (e.g., Python), SQL, ETL/ELT processes, Data Streaming and cloud platforms.



@Rainy Li

Location: **Waltham, MA**

Language: **English, Mandarin Chinese**

Role: **BI Delivery Lead**



@Eric Ma

Location: **Austin, TX**

Language: **English, Mandarin Chinese**

Role: **Data Engineer**

Fav Quote: **Why is the sky the limit when the moon has already been walked on?**

Tools & Technologies

1. Cloud Platforms:

- AWS: S3, Lambda

2. Data Warehousing:

- Snowflake

3. ETL/ELT and Data Integration:

- Fivetran
- dbt

4. Stream Processing:

- Apache Kafka

5. Databases:

- Heroku PostgreSQL
- MS SQL

6. Data Modeling and Governance:

- OvalEdge
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Notable Projects

1. **Snowflake Migration :**
 2. **Data Governance:**
 3. **Data Pipeline Modernization**
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Contact

For any queries or collaboration requests related to data projects, please contact:

- Team Lead:
 - General Enquiries:
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Conclusion

The Data Architecture and Data Engineering group stands at the intersection of cutting-edge technology and business intelligence. Our team ensures that the organization's data infrastructure is not only robust but also primed for the future, driving innovation and insights.