

# SEUNGRYUL ANDREW LEE

D A T A I N F R A S T R U C T U R E E N G I N E E R

## PROFILE

Applied mathematics-trained Data & ML Infrastructure Engineer with 4+ years of experience designing scalable data platforms powering analytics, machine learning, and real-time decision systems. Experienced in building distributed pipelines, feature data services, and production ML data workflows across Azure, Databricks, and AWS environments. Proven track record developing event-driven ingestion systems, lakehouse architectures, and API-driven data products that enable experimentation, personalization, and AI-driven insights at scale.

## PROFESSIONAL EXPERIENCE

### AI Data Engineer

QVC group | 2025 - Present

- Architected real-time event ingestion and personalization data pipelines across multi-channel commerce platforms using Azure Data Factory and Databricks (PySpark), enabling behavioral analytics and ML-driven recommendation workflows.
- Designed a Delta Lake-based lakehouse architecture processing hundreds of millions of behavioral events daily, optimizing Spark partitioning and storage layouts to reduce pipeline execution cost and improve query latency.
- Owned platform data models for YouTube and Meta campaign analytics, enabling executive reporting and cross-channel performance insights.
- Built production FastAPI services exposing curated metrics and model outputs, and implemented statistical validation and monitoring systems to detect drift and schema inconsistencies across high-volume datasets.

### Full Stack Engineer

Axtria Inc. | 2024 - 2025

- Developed and versioned RESTful data services using FastAPI and Azure App Service, exposing curated datasets and analytical outputs to internal stakeholders through production-grade APIs.
- Optimized large-scale Spark workloads through partitioning strategy analysis, indexing improvements, and query performance tuning to enhance throughput and resource utilization.

### Data Engineer

Uber | 2022 - 2024

- Architected large-scale distributed data pipelines powering Uber's Marketplace and Payments decision systems.
- Built JVM-based (Scala) microservices enabling ML models and experimentation platforms to consume consistent, high-quality features with strict SLAs.

## CONTACT

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## EDUCATION

### NEW JERSEY INSTITUTE OF TECHNOLOGY

BS in Applied Mathematics

BS in Computer Engineering

## SKILLS

### Data Platforms & ML Infrastructure

Apache Spark (PySpark), Databricks, Delta Lake (Lakehouse), Distributed Data Processing, Real-Time Data Pipelines

### Cloud & Infrastructure

Microsoft Azure (ADF, Synapse, ADLS, Azure ML), AWS (S3, Redshift), Scalable Cloud Data Platforms

### Data Engineering

High-Volume Event Ingestion, Distributed Data Modeling, Workflow Orchestration (Airflow), Data Pipeline Architecture

### Backend & APIs

FastAPI, RESTful APIs, API-Driven Data Products, Microservices

### Systems & Optimization

Distributed Systems Performance Tuning, Partitioning Strategy Design, Algorithm Design, Data Quality & Validation

## CERTIFICATIONS

- Data Warehousing with Databricks
- Microsoft Fabric Analytics Engineer Associate (DP-600)
- Azure AI Engineer Associate (AI-102)
- Advanced Machine Learning Operations (Databricks)
- Academy Accreditation – Databricks Fundamentals