

# Senior Data Engineer - Data Driven Organisation - Aer Lingus

## 1. Purpose of the Role

The Senior Data Engineer is a highly skilled data management specialist responsible for designing, developing, and implementing robust data pipelines and data warehouse solutions in accordance with Aer Lingus standards.

**This role is explicitly AI-native.** The Senior Data Engineer is expected to use modern AI-assisted engineering tools as a core part of their daily workflow to radically accelerate analysis, data modelling, and solution delivery. Manual, build-from-scratch approaches are replaced with intelligent use of AI, combined with strong engineering judgement, to deliver high-quality, production-ready data assets in hours or days rather than weeks.

The role works closely with architects, product owners, analysts, and other engineers to ensure fast, reliable, and well-governed delivery of data products that create measurable business value.

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## 2. Principal Accountabilities / Responsibilities

### Collaboration & Technical Leadership

- Act as a senior technical contributor within the Data Driven Organisation (DDO), leading by example in modern, AI-accelerated engineering practices.
  - Mentor and guide junior engineers and analysts, helping them adopt effective AI-assisted workflows while maintaining strong engineering standards.
  - Lead technical discussions with architects, product owners, and business stakeholders, translating ambiguous requirements into clear, executable data solutions.
  - Foster a culture of speed, experimentation, and continuous improvement, grounded in sound engineering judgement and accountability.
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### AI-Accelerated Data Engineering

- Use AI-assisted tools (e.g. Claude or Copilot-style assistants and large language models) as a first-class part of the engineering workflow to:
  - Rapidly explore and interpret unfamiliar datasets, schemas, APIs, logs, and semi-structured data (e.g. JSON)
  - Propose, iterate, and critically evaluate data models

- Generate, refine, and optimise SQL, Python, and PySpark code
  - Prototype end-to-end pipelines from raw data to analytics-ready outputs
  - Move confidently from a blank or ambiguous problem statement to a working technical solution by combining domain knowledge, AI capability, and engineering experience.
  - Apply rigorous validation and critical thinking to all AI-generated outputs, ensuring correctness, performance, security, and maintainability before production use.
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#### **Data Solutions**

- Design, build, and maintain scalable, reliable, and high-performance data pipelines, data lake components, and data warehouse models.
  - Take accountability for end-to-end solutions, from source ingestion through to analytics-ready datasets.
  - Ensure data solutions align with Aer Lingus architecture standards, governance requirements, and long-term platform strategy.
  - Optimise solutions for performance, cost efficiency, and ease of use by downstream analytics, data science, and reporting teams.
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#### **Data Governance & Quality**

- Embed data quality, observability, and validation into pipelines from the outset rather than as a downstream activity.
  - Use AI tooling where appropriate to identify edge cases, data quality risks, and anomalies.
  - Clearly document data assets, assumptions, and design decisions to enable transparency, reuse, and auditability.
  - Design and maintain monitoring, logging, and alerting to ensure reliability and resilience of production data assets.
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#### **Technological Innovation**

- Stay current with emerging data engineering, analytics, and AI-assisted development practices.
  - Evaluate and adopt new tools and techniques that materially reduce time-to-delivery, improve solution quality, and increase team productivity.
  - Contribute to the evolution of Aer Lingus data engineering standards to reflect modern, AI-enabled ways of working.
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### 3. Qualifications, Competencies & Experience

#### Essential Qualifications / Experience

- Significant experience (typically 5+ years) delivering data engineering solutions in an enterprise environment.
  - Strong data engineering fundamentals, with the ability to rapidly produce high-quality SQL, Python, and PySpark using a combination of technical knowledge and AI-assisted development tools.
  - Demonstrated, hands-on use of AI tools as part of day-to-day analytics and engineering workflows.
  - Deep understanding of data modelling concepts and patterns (e.g. dimensional modelling), and the ability to use AI to accelerate model design and iteration.
  - Experience working with modern data platforms such as Databricks and Snowflake.
  - Experience deploying analytics solutions on cloud platforms (e.g. AWS or Azure).
  - Experience with orchestration, ETL, and BI ecosystems (e.g. Airflow, Power BI).
  - Experience with data quality, governance, or observability tooling.
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#### Essential Competencies / Skills

- Strong bias towards delivery speed and business impact, without compromising data quality, security, or governance.
  - Exceptional problem-solving skills, particularly in ambiguous or poorly defined problem spaces.
  - Excellent judgement in reviewing, validating, and hardening AI-generated code and designs for production environments.
  - Strong communication skills, with the ability to explain technical concepts and trade-offs to non-technical stakeholders.
  - Proven track record of improving team working practices and raising overall engineering maturity.
  - Comfortable operating within a scaled agile (SAFe) delivery environment.
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#### Desirable Criteria

- Degree in Computer Science, Data & Analytics, or a related field.
- Experience acting in a technical lead or informal people-lead capacity.
- Experience designing enterprise-scale data platforms and complex analytical ecosystems.

- Experience driving adoption of new tools, platforms, or ways of working across a team.
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#### 4. Role Mindset (Clarifying Statement)

We are not looking for engineers who spend days manually writing SQL or Python from a blank editor. We are looking for **AI-ready engineers** who think clearly about data problems, use modern AI tools intelligently, validate results rigorously, and deliver high-quality data solutions at pace.

Speed, judgement, and impact matter more than manual syntax memorisation.