

# Welcome Note

## Welcome & Introductions

1. Meet the tutor: background, real-world experience, and why this class exists.
2. Meet the students: share what you do now, your current comfort level with data, and what excites (or scares) you about learning it.

## **Your “Why” – Becoming a Data Expert**

1. The personal and professional reasons this skill set matters.
2. How data expertise can open doors across industries and roles.

## **Your Game Plan for Success**

1. Mapping out the learning journey: skills, projects, and habits.
2. Balancing theory, hands-on practice, and portfolio building.



## **Data Engineers + AI Across Industries**

1. How finance, healthcare, retail, entertainment, and other domains use data engineering to power AI.
2. Real examples of how “behind-the-scenes” engineering changes real lives.

## **The Big Four: SQL, Python, Spark & Design Patterns**

1. Why these are the foundation of data engineering.
2. How mastering them gives you freedom from being tied to any one platform.



## Databases: Types & the Titans Behind Them

1. Companies that build them: Microsoft, Oracle, MongoDB, Amazon, Google.

## Hands-On Start: Installing SQL Server

1. Step-by-step installation guide.
2. SQL Server Database Engine Link  
(<https://go.microsoft.com/fwlink/p/?linkid=2215158&clid=0x409&culture=en-us&country=us>)
3. Writing your first SQL query: the “Hello World” of data