

# 10.03 Introduction to Scala

# What is Scala?

- Scala, an acronym for “scalable language,” is a general-purpose, concise, high-level programming language
- It runs on JVM (Java Virtual Machine) and interoperates with existing Java code and libraries
- Scala allows you to build high-performance systems with easy access to huge ecosystems of libraries

# What is Scala?

- Anything you use Java for, you can use Scala instead
- It's ideal for back-end code, scripts, software development, and web design
- Programmers also tout Scala's seamless integration of object-oriented features and functional languages as the perfect tool for parallel batch processing, data analysis using Spark

# Companies currently using Scala include:

- 9GAG
- Asana
- LinkedIn
- Reddit
- Twitter

# Why Scala?

- The data science community is divided in two camps:
  - One which prefers Scala whereas the other preferring Python
  - Each has its pros and cons and the final choice should depend on the outcome application.

# Why Scala versus Python?

	SCALA	PYTHON
<b>Performance</b>	10x Faster than Python	Slower
<b>Learning Curve</b>	Difficult to master	Easier to learn
<b>Ease of Use</b>	More words are needed for coding i.e. more verbose / more expressive	Less words are needed for coding i.e. less verbose / less expressive
<b>Advanced Features</b>	Limited visualisation modules	More libraries for ML and NLP
<b>Project Scale</b>	Best suited for large-scale projects	Works better for small projects

# Why Scala versus Python?

- Ultimately, it depends on what your project needs are:
  1. If you want to work on a smaller project with less experienced programmers, then Python is the smart choice.
  2. If you have a massive project that needs many resources and parallel processing, then Scala is the best way to go.