

PYTHON vs JAVA vs JAVASCRIPT

	PYTHON	JAVA	JAVASCRIPT
First Released	1991	1995	1995
Typing	 Dynamic	 Static	 Dynamic
Syntax	Simple &  readable	 Verbose	 Flexible C-like
Execution	 Interpreted	 Compiled & JVM	 Interpreted Browser/Node
Paradigms	 Object-functional	 Object-functional	 Event-driven, functional
Use Cases	Data Science, AI, Web, Automation	Enterprise Apps, Android, Backend	Web Apps Frontend & Back
Performance	 Moderate	 High	 Moderate
Memory Management	 Automatic GC	 Automatic GC	 Automatic GC
Libraries & Ecosystem	 NumPy, Pandas	 Spring, Hibernate	 React, Node, Angular
Learning Curve	 Easy for beginners	 Medium	 Easy to moderate
Platform	 Cross-platform	 JVM, Cross-platform	 Browser, Node.js

Key Takeaways

- Python  Best for  automation, AI
- Java  Best for enterprise-level applications, Android, backend
- JavaScript  Best web development