

# Machine Learning Architecture

(and why it matters)

# What do we mean "System Architecture"?



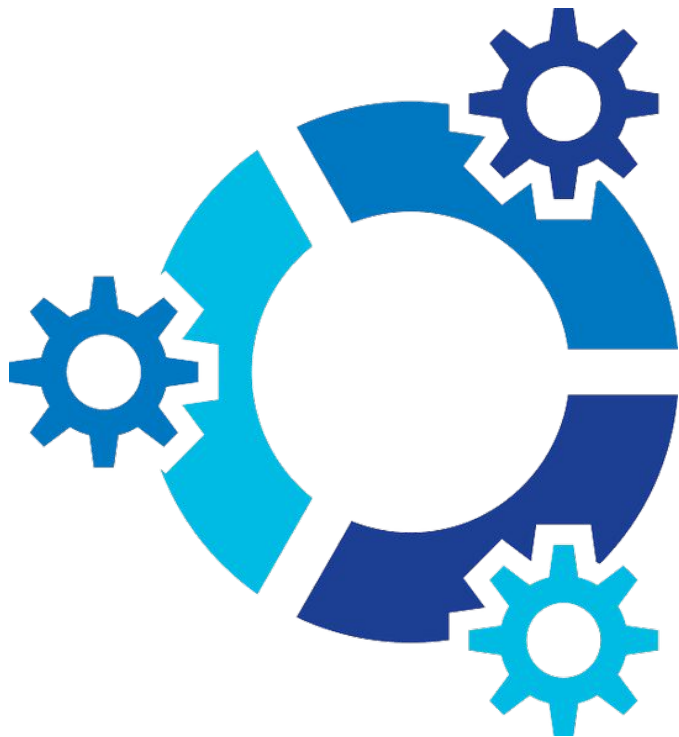
- Let's dig into the terminology to avoid confusion...



# Systems

Machine learning in production requires multiple different components in order to work:

- Infrastructure
- Applications
- Data
- Documentation
- Configuration

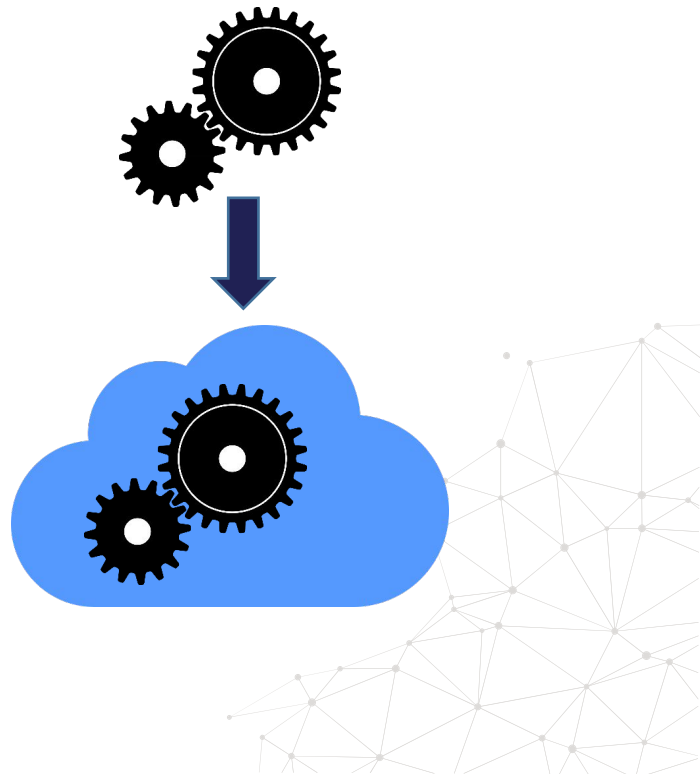


# Architecture

ISO/IEC 42010 defines **Architecture** as:

“fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution”

Or, in plain English: “The way software components are arranged and the interactions between them.”



# Why Start With Architecture - Challenges

Maintaining ML systems is difficult

All the challenges of traditional software systems \*plus\* new challenges for model and data changes.



# Section 3 Structure

- Lecture 2: Challenges of ML Systems
- Lecture 3: Tackling the Challenges
- Lecture 4: Architecture options
- Lecture 5: Architecture component breakdown

