



Deploying predictive models

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Who am I?

- Founder of Domino Data Lab, a software platform for enterprise data science
- Previously built analytical software at a big hedge fund
- BA, MS in computer science

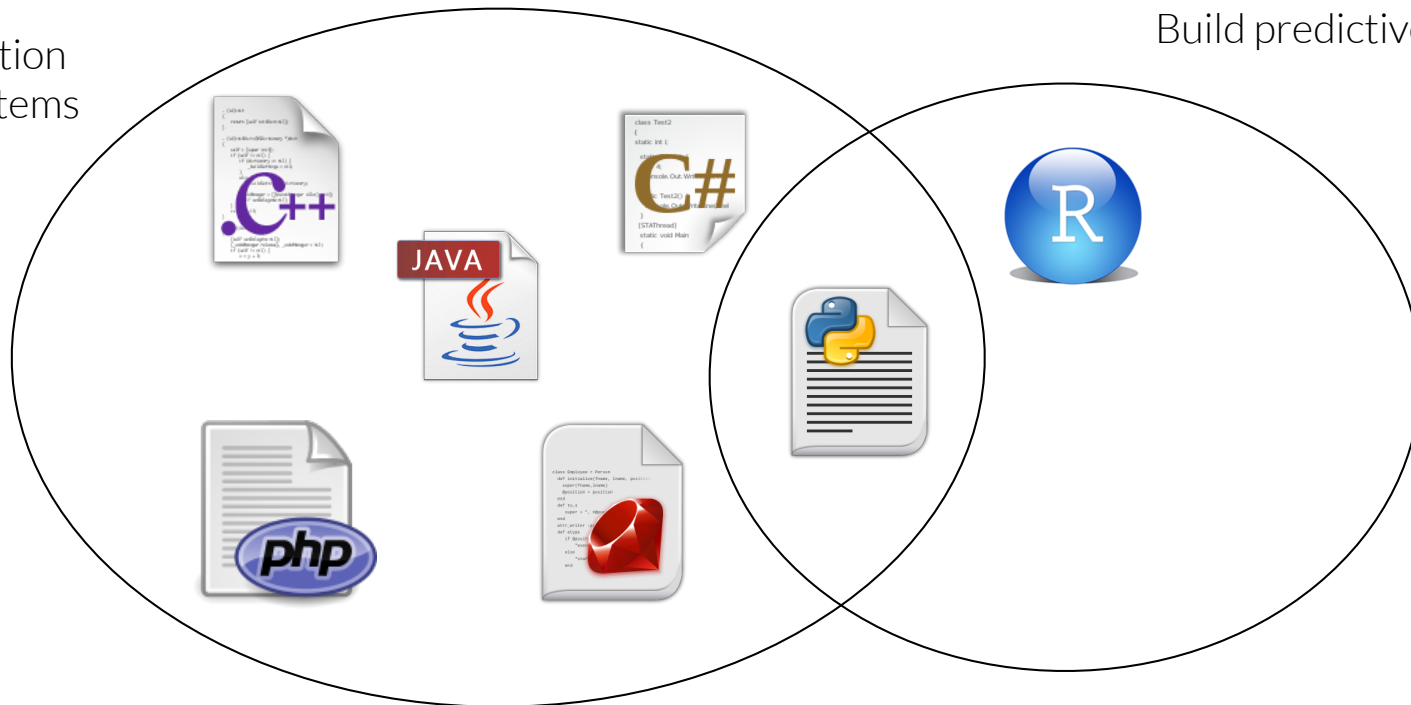


Motivation

Different languages good for different tasks

Build production
software systems

Build predictive models



Motivation

Organizational design friction

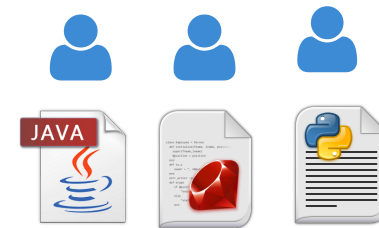
Data Scientists



Model improvements



Software Engineering



Delayed because of:

- Integration / porting of logic
- Out-of-phase release cycles
- Mismatched priorities

Solution

Data scientists create predictive models and publish them to Domino.

Domino provides a secure, low-latency infrastructure for hosting predictive models as web services

Developers can invoke models from general purpose languages by making simple HTTP calls



- Failover
- Security
- Logging
- Seamless updates
- etc

Demo

Production concerns

- Very low latency
- Zero-downtime upgrades
- High availability
- Reproducibility
- Logging
- Security
- Scheduled updates

Best practices

- Separate training, initialization, and prediction
- Make your prediction functions thread-safe
 - Don't mutate any shared state
- Leverage persistence/serialization tools (e.g., Rda)

Use cases

- Recommendation systems (music, books, products, cars, etc)
- Insurance
- Lease / loan / credit card approval

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