

# Data science that survives contact with decisions.

Reproducible case studies in forecasting, prioritization, and human-in-the-loop machine learning.

PROBLEM FRAMING

MODELING

DELIVERY

MONITORING

# Trust comes through action.

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**Accuracy is  
evidence.**

**Adoption is the  
outcome.**

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Every project starts with a decision, builds the smallest defensible model, and ends with an operating path.

# Three projects. One delivery loop.

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## PROJECT 01

### Demand forecasting

Turn uncertain demand into a planning range teams can use.

#### DECISION

How much capacity should we commit?

DATA SCIENCE PORTFOLIO

## PROJECT 02

### Churn prioritization

Rank intervention opportunities by value, risk, and timing.

#### DECISION

Who should the team contact first?

## PROJECT 03

### Ticket triage

Route support requests while preserving human oversight.

#### DECISION

Where does each request go next?

# A forecast needs a decision.

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## QUESTION

**What should be stocked before demand arrives?**

Point estimates hide the cost of being wrong, so the output includes uncertainty and bias by horizon.

## BUILD

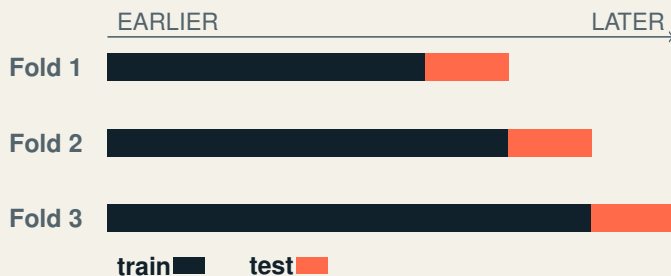
- ✓ Seasonal baseline before complexity
- ✓ Rolling-origin validation
- ✓ Calibrated prediction intervals
- ✓ Bias by product and horizon

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## OUTPUT

A weekly planning table with expected demand, uncertainty, and exception flags.

# Validation must travel forward.



## WHAT THIS PREVENTS

Future leakage, optimistic backtests, and a single metric that masks failure.

## REVIEW TOGETHER

Error • bias • interval coverage • stability

Demonstration project: the evaluation design is the evidence; no production impact is claimed.

# Risk is not the next-best action.

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## QUESTION

**Who should a limited team contact first?**

Risk alone ignores upside and whether an intervention is feasible.

## PRIORITY LOGIC

**priority = risk × value  
× actionability**

- ✓ Calibrate before ranking
- ✓ Evaluate at team capacity
- ✓ Translate reasons into review cues
- ✓ Measure lift at the cutoff

# Automation needs an exit.

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## ROUTING POLICY

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| Signal | Action                  |
|--------|-------------------------|
| High   | Route automatically     |
| Medium | Suggest; agent confirms |
| Low    | Send to general queue   |

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Confidence is an operating control.

## GUARDRAILS

- ✓ Macro and per-class recall
- ✓ Abstention threshold
- ✓ New-topic drift queue
- ✓ Agent override captured
- ✓ PII excluded from features

# One workflow, end to end.

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**01**

## **Decision**

Frame choice and error cost.

**02**

## **Contract**

Set inputs and split.

**03**

## **Baseline**

Beat the simplest option.

**04**

## **Interface**

Deliver for use.

**05**

## **Monitor**

Watch data and action.

- **The handoff is designed at the start, not appended at the end.**



# Reviewable before impressive.

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```
project/  
  data_contract.yml  
  src/  
    {features,train,evaluate}.py  
  tests/  
  reports/model_card.md  
  Makefile
```

## REVIEW STANDARD

- ✓ One command rebuilds outputs
- ✓ Splits are deterministic
- ✓ Assumptions live beside code
- ✓ Metrics map to a decision
- ✓ Limitations are explicit

# Breadth delivers; depth protects.

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## ACROSS THE WORKFLOW

SQL and data modeling / Python /  
experiment design / APIs / orchestration /  
dashboards / model monitoring

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Tools change. The standard stays fixed: traceable  
inputs, honest evaluation, and a clear operating path.

## DEEPEST STRENGTHS

**01**

EVALUATION DESIGN

**02**

DECISION-FOCUSED MODELING

**03**

REPRODUCIBLE DELIVERY

# Clarity at every handoff.

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01

## Frame the decision

Turn ambiguity into a measurable choice and an explicit error cost.

02

## Make evidence inspectable

Build baselines and validation others can challenge and rerun.

03

## Design for adoption

Ship thresholds, fallbacks, ownership, and monitoring.

# Bring a decision, a dataset, and a constraint.

I will bring a clear baseline, an honest test,  
and a path to use the result.

PORTFOLIO REVIEW / CASE STUDY DEEP DIVE