AI4ALL Solutions
Smart Leaders, Smarter AI Applications

MATHEMATICAL PRECISION IN THE AGE OF AI HYPE

Math4NL Community Event, Dec 2025

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

MY JOURNEY

ACADEMIA → INDUSTRY

VU Amsterdam

- Master Business Mathematics & Informatics
- PhD Operations Research & Survey Design

- Foundation in rigor & modeling
- Structured thinking
- Interdisciplinary mindset
- Public speaking

Data science

- ML in production
- R + C++ → Python + Dev On Duty
- AWS + Databricks + Snowflake
- Data scientist → SVP AI Strategy

- Solving equations & business problems with clarity
- Engineering + mathematics + product dev + executive decisions

AI4ALL

- Cut through AI hype
- $$$$ due diligence
- AI transformation advisor
- Business value + math reality

- Tech, data & algorithm audits
- Tech↔Business translator
- Responsible AI dev roadmap
- AI/ML executive educator

AI4ALL MOAT

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

1 UNDER WHAT ASSUMPTIONS?

Stress-testing claims, Where will my model/system break? Reveal hidden risks, Decisions under uncertainty

2 SAMPLE → POPULATION

Is this representative? Will this generalize? A/B uplift test, Noisy metrics vs robustness questions

3 HIERARCHICAL THINKING

Conflicting objectives, short vs long-term, system thinking, specialized vs general models

4 OPTIMIZATION FRAMING

Mental habit, breakdown problems, name the constraints and trade-offs, applicable everywhere

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

PIVOTAL MOMENT #1

THE STATS RIDDLE

1st line of code → $53M B2B ML product

App Usage Analytics

How to estimate?

Budget vs data

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

PIVOTAL MOMENT #2

NON-ZERO PROBABILITY

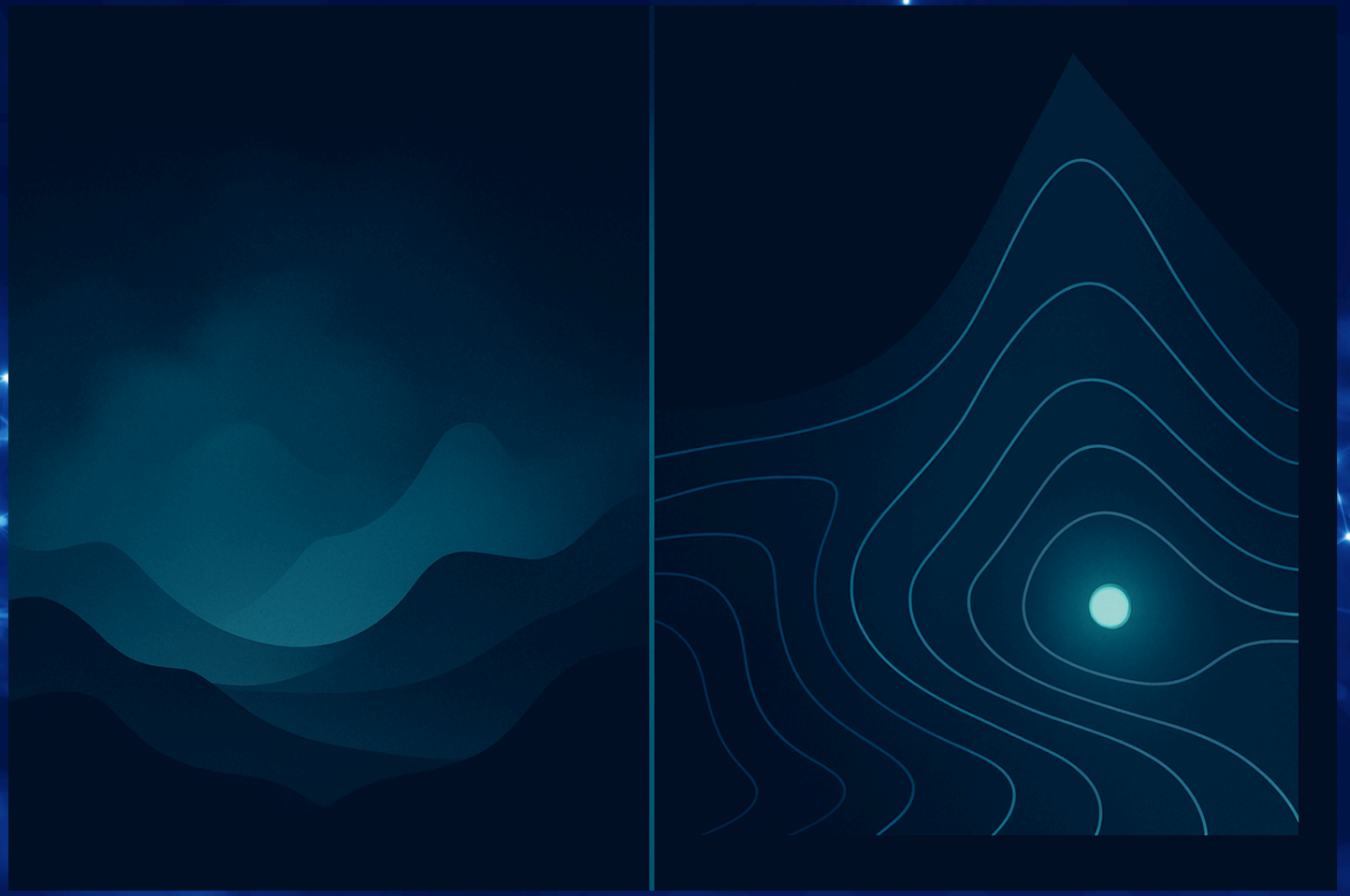
Unlikely scenario that changed everything

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

PIVOTAL MOMENT #3

CLEAR DECISIONS

Stock Market



Customers
Investors
CEOs
Auditors

Hand-wavy marketing

Communicate with precision

UNEXPECTED LESSONS

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

1 PITCH/BOARD DECK REALITY

Bird‘s eye view vs details, commit to execute the risky future, alternatives vs recommendation, tech trends explained

2 REGULATORY OPPORTUNITIES

Real challenge → cross-functional learning, hierarchical & ensemble models, MLOps, structured sales

3 FALLBACK

Failed assumption → new fallback algo, experimentation vs exploitation, make limitations visible, at all risk levels

4 WE NEED AI

What for? What are the constraints? Did you try ML? How is your data organized? What is your tech stack?

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

THE THROUGHLINE

Grounding AI strategy in the mathematics it actually comes from

PROBABILITY THEORY, OPTIMIZATION, PATTERN RECOGNITION

mapped along the realities of

SCALE PRODUCTION & MOAT

THE CORE TRUTH

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

Most “AI experts” just guess while YOU

- formalize mess
- build proofs
- see the whole system
- are comfortable in uncertainty
- show intellectual integrity
- build trust

Your academic training uniquely positions you to lead AI transformation

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

WHERE YOU CAN CREATE IMPACT

1 TECHNICAL LEADERSHIP

- Not just building systems
- Designing with mathematical integrity
- Leading teams evaluating claims rigorously

2 STRATEGIC ADVISORY

- Technical due diligence at scale
- Investors and executives pay for clarity they cannot get elsewhere

3 ENTREPRENEURSHIP

- Genuine innovation creates defensible advantage
- Not just "AI wrappers" but real structural insights

AI4ALL Solutions
Smart Leaders, Smarter AI Applications

THANK YOU