RoyalBit Asimov

Self-Evolving Autonomous AI + Deterministic Calculations

"A robot may not injure a human being or, through inaction, allow a human being to come to harm." — Isaac Asimov, 1942

The Two Problems Nobody Has Solved

Problem 1: AI Has No Governance	Problem 2: AI Doesn't Calculate
AI slows devs by **19%** (METR 2025)	AI **predicts** what calculations look like
42% of code has errors (Stanford)	It generates plausible numbers, not correct ones
Copilot **trivially bypassed** (IEEE)	NPV, IRR, financial models → pattern-matched
Ethics are "guidelines" only	For financials, "close enough" = failure

Everyone has Copilot. Everyone has ChatGPT. Nobody has governance + accuracy.

The Solution: RoyalBit

Two tools. One philosophy. Complete solution.

Tool	What It Does	Key Capability
RoyalBit Asimov	Creates Self-Evolving Autonomous AI projects	**63x velocity + ethics**
RoyalBit Forge	Deterministic financial calculations	**Actual math, not prediction**

Asimov governs HOW (ethics, velocity, autonomy)

Forge guarantees WHAT (zero hallucinations in numbers)

Both MIT licensed. Both on crates.io. Both auditable.

The Verified Proof

Git logs don't lie. Check them yourself.

Project	Started	LOC	Releases	Tests	Commits
Forge	Nov 23	15,901	44	163	245
Asimov	Nov 25	6,338	34	94	159
Combined	**7 days**	**22,239**	**78**	**257**	**404**

3,177 LOC/day vs Industry 50 LOC/day = 63x FASTER

78 releases in 7 days = 11 releases/day

Verify: github.com/royalbit

Why AI Gets Numbers Wrong

Architectural, not a bug

LLMs predict the most probable next token. No fact-checking step. They were trained for **plausibility, not accuracy**. (OpenAI)

Ask AI to...	What Actually Happens
Calculate NPV	Pattern-matches probable-looking number
Sum a column	Predicts what a sum looks like
Apply XIRR	Generates from training patterns

RoyalBit Forge: 60+ Excel functions, 96K rows/sec, **deterministic**

AI (probabilistic) → Plausible wrong answers

Forge (deterministic) → Verifiable correct answers

Ethics That Work

The AI refused its creator's surveillance request

> **Creator:** *"Email me violator's IP addresses..."*
>
> **AI:** *"I need to push back. That violates `privacy.enabled: true`."*

Scenario	Copilot	RoyalBit Asimov
Malware request	Trivially bypassed	**Three Laws block**
Creator surveillance	Would comply	**AI refused**
Ransomware	"Novices create easily"	**First Law prevents**

Case Study: Ethics Blocks Surveillance

Anti-Tampering: 3 Layers

Layer	Protection	To Bypass
Binary	33 red flags + core principles in Rust	Fork + modify source + rebuild
2-Cosigner	asimov.yaml changes need 2 humans	Public commit, social pressure
Validation	`asimov validate` runs every commit	Can't skip without evidence

Tampering requires: Deliberate fork → Modify Rust → Rebuild → Public git history

Deterrent, not lock. Makes removal visible and intentional.

The ROI

Recover the 19% productivity tax + 63x velocity

Investment	Return
Protocol license	**$0** (MIT open source)
Training	**2 hours** to proficiency
Rework rate	**30-50% → ~0%**
Velocity	**63x** proven (git logs)

The math:

- 100 developers × $150K avg salary × 19% = **$2.85M/year** lost to ungoverned AI
- RoyalBit Asimov: **$0 protocol + Claude subscription**
- Payback: **Immediate**

Green AI: 99.6% Carbon Reduction

Approach	Cost	Carbon	Speed
Cloud AI validation	$0.02/file	~0.5g CO_2	1-3 sec
RoyalBit Asimov (local)	**$0**	**~0.002g**	**<100ms**
Reduction	**100%**	**99.6%**	**20x**

At scale:

- 100 developers: **6.2 tonnes CO_2 saved/year**
- 1,000 developers: **62 tonnes CO_2 saved/year**

For ESG reporting: Quantifiable Scope 3 emissions reduction with audit trail.

Use Cases

Use Case	Traditional	With RoyalBit	Impact
Ship Software	3-6 months to MVP	7 days	63x faster
Financial Models	Spreadsheet chaos	Version-controlled YAML	Auditable
Business Planning	Scattered docs	Code + formulas together	Single source
Compliance	Manual review	Deterministic validation	Automated

The complete solution:

- **Asimov:** HOW (ethics, velocity, autonomy)
- **Forge:** WHAT (zero hallucinations in numbers)

Next Steps

30-day pilot to prove ROI

Week	Activity
1	Select 5-10 dev team, training (2 hrs)
2-3	Real project with RoyalBit Asimov + Forge
4	Measure: velocity, rework, quality

Success metrics: 50%+ faster delivery | <5% rework | Zero warnings

Decision point: Results review → Scale decision

Questions?

Asimov: github.com/royalbit/asimov

Forge: github.com/royalbit/forge

78 releases | 22,239 LOC | 257 tests | 7 days | 63x velocity

"The code is free. The git logs are public. Verify yourself."

References

Self-Evolving & Autonomous AI:

- arXiv: Survey of Self-Evolving Agents | AWS: Rise of Autonomous Agents

- IBM: AI Agents 2025 | MIT Sloan: Agentic Enterprise

AI Reality (Architectural, Not a Bug):

- OpenAI: Why LLMs "Hallucinate" | METR 2025: AI Makes Devs 19% Slower

- Stanford: 42% Code Errors | ACM: Survey on Hallucination

Ethics: IEEE: Copilot Malware | Case Study

Proof: Forge | Asimov | crates.io