

Eugenio Noyola Leon (Keno Leon)

SOFTWARE ENGINEER • AI/ML ENGINEER • QUANT SYSTEMS DEVELOPER

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SUMMARY

Software, AI/ML, and quantitative systems engineer: Python, LLM evaluation and tooling, live ML forecasting (Numerai, since 2017), and published technical writing (200+ articles, 4 books).

Timeline of public output by domain:

- Ethereum developer tooling in 2017
- Live ML forecasting systems in Numerai since 2017
- Cognitive architecture research in 2018
- LLM workflow tooling in 2023

Output across that period includes:

200+ published articles, 4 books, 43 public repositories, 100+ ML models, and weekly live ML scoring with real financial stakes since 2017.

EXPERIENCE

Independent AI / Quant Systems Builder — k3no.com

2010 – Present

- Founded the Synthetic Cognition Lab (2026, <https://kenoleon.github.io/synthetic-cognition-lab/>): open, reproducible experiments on cognitive behaviors in AI models, each shipped with runnable code and a browser bench. First report, Gravity from Touch, published on Zenodo (doi:10.5281/zenodo.23654739): in a physics simulation where the right answer is known, one LLM read surface forces correctly ~86% of the time but answered ~28% of questions touch couldn't answer instead of declining
- ADIA Lab Structural Break Challenge: Real-Time Edition (CrunchDAO, 2026): time-series change-point detection; public TS-AUC 55.0 → 63.37 via per-series whitening, Bayesian change-point evidence, and train/serve parity gating; best rank 85/747, final 117/810
- Published *EpisodicRAG: A Controlled Interference Benchmark and a Diagnosed Retrieval Bottleneck in Graph RAG* on Zenodo (2026, <https://zenodo.org/records/21924967>): a controlled benchmark for episodic-memory retrieval and a diagnosis of where graph RAG retrieval breaks down
- Sustained live production ML scoring in the Numerai quant tournament since 2017 using 100+ regression and forecasting models with real financial exposure

- Built systematic trading and market-analysis infrastructure for Binance and Polymarket workflows including backtesting, forecasting, and automation pipelines
- Developed and shipped LLM tooling products including BubbleUI (local-first multi-model LLM interface with context injection), Context-Kit (LLM workflow context framework), and Context Pad (Markdown reader and scratchpad for LLM workflows)
- Contracted directly by Numerai for frontend development and technical documentation
- Conducted neuroscience-grounded cognitive architecture research across a 22-part article series, published book, and multiple runnable Python implementations
- Built experimental AI systems including NeuronPlayground, STMTToWM, and crowcrow, a parametric articulatory speech synthesizer based on vocal tract physics
- Produced an early Ethereum onboarding ecosystem including a published Solidity book, 12-part technical series, smart contract security forensics, ERC20 infrastructure examples, and a companion GitHub repository
- Built the Quant Matters YouTube channel (<https://www.youtube.com/@QuantMatters>) focused on quantitative finance, forecasting systems, market structure, and ML-first trading approaches

Front End / Web Developer & Designer — k3no.com (US clients)

2003 – 2010

- Delivered frontend engineering, UI/UX, and product consulting for agencies and startups across California
- Full-stack MVP development for BWire (social network), product research and tech packs for Biopac Systems, CMS development for Halmstrom Design, SEO and lead generation for Potrero Media
- Worked across frontend architecture, branding systems, interaction design, and early-stage technical product development

Junior Research Assistant / Analyst — ING Barings

1997 – 2000

- Rotated across equities research, trading desk operations, money markets, risk, compliance, and back office functions
- Built internal bond market analytical tooling that became the foundation for later quantitative finance and forecasting work
- Developed institutional finance literacy across trading operations, market structure, and financial systems analysis

SKILLS

- **Programming:** Python, JavaScript, Solidity
- **AI / ML:** LLM evaluation, Benchmark design, LLM tooling, TensorFlow/Keras, ML pipelines, Forecasting systems, Time-series change-point detection, OpenCV, PyAudio, FFT signal processing, Cognitive architecture research

- **Quant & Finance:** Quantitative backtesting, Systematic trading infrastructure, Financial modeling
 - **Web & Blockchain:** Three.js, Web3.js, Hardhat, Ethereum systems, Developer tooling
 - **Communication:** Technical writing
 - **Spoken languages:** English (native/bilingual), Spanish (native), Italian (conversational)
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PUBLICATIONS

- *Continuity — 2026 Foundational Edition* (2026)
 - *Conscious Artificial Intelligence: Part 1. Foundations* (2018)
 - *Ethereum, Tokens & Smart Contracts* (2017)
 - *Making a Simple Neural Network: An Illustrated Guide* (2017)
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SELECTED SIGNALS

- 200+ published articles (1.1M+ views on Medium); ~930k Stack Overflow reach
 - 43 public repositories spanning AI systems, quant infrastructure, Ethereum tooling, and neuroscience-grounded software
 - Live Numerai ML competition participation since 2017
 - 100+ ML forecasting and regression models built
 - Published Solidity and neural network books before mainstream adoption cycles
 - Nearly 30 years of cross-domain implementation history spanning finance, software systems, AI, and technical education
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EDUCATION

ITAM (Instituto Tecnológico Autónomo de México)

Economics (incomplete), 1993–1995

AMIB (Asociación Mexicana de Intermediarios Bursátiles)

Securities & Investment Certificate, 1999

Self-Directed Study

Ongoing research in machine learning, quantitative finance, AI architecture, neuroscience, forecasting systems, and industrial design