Giacinto Paolo (GP) Saggese, PhD

Email: gp@causify.ai | gsaggese@umd.edu | saggese@gmail.com
LinkedIn | GitHub | Website
Cell: 408–431–1286, Washington DC

SUMMARY

- Technology executive and AI/ML researcher with 20+ years building production AI/ML systems, quantitative trading strategies, and high-performance distributed platforms
- Deep expertise in Causal AI, Bayesian modeling, knowledge graphs, and large-scale ML infrastructure
- Founded 3 venture-backed companies with successful exits ($24M acquisition by Synopsys); raised $13.6M+ across ventures

CORE COMPETENCIES

AI/ML: Causal AI | Bayesian Modeling | Time-Series Forecasting | Knowledge Graphs | ML Infrastructure
Systems: Distributed Systems | HPC | GPU/CUDA | Compilers | Optimization
Finance: Quant Trading | Algo Trading | Portfolio Optimization | Alpha Research
Leadership: Technical Strategy | Product Development | Team Building | Fundraising

EXPERIENCE

2023-today: CTO & Co-founder, *Causify.ai* (College Park, MD)

- Built a causal modeling platform using Bayesian inference, knowledge graphs, and temporal ML
- Designed automated pipelines for model building, scoring, and deployment
- Led technical vision, architecture, engineering, and early customer adoption
- Supported $5M fundraising and product strategy to $1M ARR

2023-today: Adjunct Professor, *University of Maryland* (College Park, MD)

- Instructor for "DATA605: Big Data Systems" (300 students per year) and "MSML610: Advanced ML" (120 students per year)
- Mentor for UMD Blockchain Accelerator and NSF I-Corps

2023-today: NSF I-Corps Instructor

- Train research teams to evaluate markets and develop commercialization paths

2021-2022: Portfolio Manager, *Engineers Gate* (New York City, NY)

- Built ML signals for equities and futures (minute-level horizon)
- Led 2-person research team; deployed models into production trading

2019-2020: CTO, *Particle.One* (San Jose, CA)

- Built ML models generating predictive commodity signals
- Raised $2.6M from Silicon Valley VCs
- Managed 10-person distributed team; delivered first commercial signals

2015-2019: Head of Alt-Data Group, *Teza Technologies* (Berkeley, CA)

- Developed ML/alt-data signals for futures, equities, FX, ETFs
- Built distributed pipelines for large-scale feature engineering and model training
- Led team of 12 researchers in Berkeley and Moscow

2011-2015: Co-founder & CTO, *June Inc.* (Santa Clara, CA)

- Designed quant strategies: stat-arb, market-neutral, long-short
- Built research stack: Python/R workflows, intraday simulator, portfolio optimizer, custom ML
- Wrote performance-critical C++ simulation components
- Raised $4M (Series A/B); led 8-person team

2010-2011: Senior Member of Technical Staff, *Synopsys* (Mountain View, CA)

- Integrated ZeroSoft's HPC simulation engine into Synopsys tools

2007-2010: Co-founder & VP Engineering, *ZeroSoft Inc.* (Milpitas, CA)

- Created simulation tech enabling **3-10x** faster IC verification
- Built compiler and graph-algorithm pipeline in C++/Verilog
- Raised $2M; customers included NVIDIA and Cisco
- Led 11 engineers; IP produced 2 patents
- Acquired by Synopsys for **$24M**

2005-2007: Senior Software Architect, *NVIDIA* (Santa Clara, CA)

- Implemented C++ verification tools for Fermi GPU
- Designed GPU blocks in Verilog and FPGA

EDUCATION

2000-2004: PhD, Electrical & Computer Engineering
University of Illinois Urbana-Champaign (Urbana, IL)

- 20+ publications in microarchitecture, cryptography, and fault tolerance

1995-2000, Master's in Electrical Engineering
University of Naples, Italy

- GPA 3.99/4.00, ranked 1st of 500+ students

2004-2005, Postdoctoral Research
University of Illinois Urbana-Champaign (Urbana, IL)

TECHNICAL EXPERTISE

Key Technical Achievements:

- Built full-stack **Causal AI platform** with graph engine, Bayesian models, temporal ML, and explainability
- Designed **HPC simulation technology** delivering **3-10x** IC-verification speedup, acquired by Synopsys for $24M
- Developed **alpha signal pipelines** for large unstructured/alt-data; deployed predictive signals across global markets
- Created **intraday simulators**, portfolio optimizers, and low-latency research infrastructure
- Built **ML Ops workflows**: data pipelines, feature stores, model validation, observability, CI/CD
- Led ML/engineering teams (8-12 people) across startups and quant firms

Technical Skills:

- **Programming:** Python, C++, GPU CUDA, x86 assembly
- **ML/AI:** Causal inference, Bayesian modeling, time-series ML, knowledge graphs, supervised/unsupervised ML, ML Ops
- **Quant Finance:** Stat-arb, market-neutral strategies, portfolio optimization, alpha modeling
- **Systems:** HPC, distributed systems, GPU/FPGA design, compilers, simulators
- **Tools & Frameworks:** PyTorch, NumPy/SciPy, Pandas, Ray, Spark, Kubernetes

ACHIEVEMENTS

- 20+ publications in top academic venues (microarchitecture, cryptography, fault tolerance)
- O1 Visa recipient (Alien of extraordinary ability in sciences)

- Ranked 1st in 500+ student Master's class, GPA 3.99/4.00
- Under-18 Italian national swimming finalist (twice)

SELECTED PUBLICATIONS & PATENTS

- Research statement
- **Full list:** List of publications, Google Scholar, DBLP, ResearchGate
- **Granted US Patents:** US 8,156,457 ("Concurrent simulation of hardware designs with behavioral characteristics"), US 8,738,350 ("Mixed concurrent and serial logic simulation of hardware designs")
- **Pending US Patents:** 63/934,790 ("Systems and Methods for Causal Failure Prediction in Time Series"), 63/960,355 ("Computational Systems and Methods for Time Series Data Processing")

OPEN SOURCE & CODE

- **GitHub Profile:** github.com/gpsaggese
- **Causify Platform (csfy):** GitHub - Main causal AI platform implementing production-grade systems combining Bayesian inference, knowledge graphs, and temporal ML
- **Causify Helpers:** GitHub - Core utilities library for data processing, model utilities, and common operations
- **Causify Tutorials:** GitHub - Educational resources with Jupyter notebooks, example datasets, and step-by-step guides

LANGUAGES

- **English:** Native or bilingual proficiency
- **Italian:** Mother tongue
- **Citizenship:** USA / Italy