

# Giacinto Paolo (GP) Saggese, PhD

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## 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 circuit 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**

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### **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**

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### **Key Technical Achievements:**

- Built full-stack Causal AI platform with graph engine, Bayesian models, temporal ML, and explainability
- Designed 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**

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- 30+ publications in top academic venues on AI, machine learning, computer architecture, cryptography, fault tolerance

- O1 Visa recipient (for aliens of extraordinary ability in sciences)
- Ranked 1st in 500+ student Master's class with GPA 3.99/4.00
- Under-18 Italian national swimming finalist (twice)

## SELECTED PUBLICATIONS & PATENTS

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- **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

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- **GitHub Profile:** [github.com/gpsaggese](https://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

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