

Pablo Maximiliano

pol@pamacado.com | www.pamacado.com | github.com/pamacado

EDUCATION

Universidad Nacional de Educación a Distancia - UNED <i>Bachelor of Science in Pure Mathematics</i>	Spain 2026
Hyper Island <i>Motion Graphics Program</i>	Stockholm 2012
University of Wales - EADE <i>Bachelor of Arts (Hons) in Graphic Design</i>	Málaga 2011

EXPERIENCE

Senior Motion Graphics Designer <i>Sweetrush</i>	May 2015 – Feb 2020 San Francisco
<ul style="list-style-type: none">Executed complex e-learning projects for high-profile enterprise clients, coordinating effectively within large, cross-functional teams to meet demanding business requirements.Collaborated seamlessly with a globally distributed team across multiple time zones, adapting communication strategies to maintain continuous project momentum.Acted as Project Lead on large-scale initiatives, directing and mentoring multidisciplinary creative teams such as illustration and animation from concept to final delivery.	
Freelance Motion Graphics Designer <i>Brandstation</i>	Dec 2014 – Apr 2015 Paris
<ul style="list-style-type: none">Traveled on short notice to assist the team on-site, successfully delivering multiple urgent projects under tight deadlines for a client in the food and beverage space.Successfully transitioned to a fully remote setup, maintaining high efficiency and seamless communication with the team.	
Middleweight Motion Graphics Designer <i>Uniform</i>	Jul 2013 – Aug 2014 Liverpool
<ul style="list-style-type: none">Successfully managed multiple concurrent workflows in a mid-sized agency, balancing lead responsibilities on major projects with the timely delivery of parallel tasks.Drove project execution from start to finish as the primary client liaison, collaborating closely with internal teams to translate client requirements into successful deliverables.	
Junior Motion Graphics Designer <i>Brikk Animation</i>	Jan 2013 – Jun 2013 Stockholm
<ul style="list-style-type: none">Managed end-to-end project lifecycles within a fast-paced startup environment, adapting execution to meet the evolving needs of a growing business.Collaborated directly with founders to drive small, mid and big sized projects from initial concept to final delivery.	
Freelance Motion Graphics Designer <i>M.A.R.K. 13</i>	Jul 2012 – Nov 2012 Stuttgart
<ul style="list-style-type: none">Rapidly onboarded to execute and deliver a time-sensitive project for one of Germany's biggest automotive companies, meeting urgent business deadlines.	
Launchpad Program <i>DDB</i>	Mar 2012 – Jul 2012 New York
<ul style="list-style-type: none">Successfully navigated a fast-paced global agency environment, adapting quickly to established workflows and project requirements.	

- Options Pricing Calculator** | *Python, NumPy, SciPy, Streamlit, yfinance* 2026
- Developed an interactive web application to calculate theoretical premiums for financial options, integrating the Yahoo Finance API to ingest real-time market data (spot prices, risk-free rates, and volatility).
 - Programmed mathematical pricing engines from scratch using NumPy and SciPy, including the analytical Black-Scholes-Merton formula and Cox-Ross-Rubinstein Binomial Trees for early exercise evaluation.
 - Engineered Monte Carlo simulations of Geometric Brownian Motion to accurately price path-dependent derivatives, such as Asian and Lookback options.
- Pixel Defenders Puzzle RL** | *Python, PyGame, Gymnasium, Stable-Baselines3, NumPy* 2026
- Engineered a custom Gymnasium (OpenAI Gym) environment from scratch, translating complex game board states into a 2,095-element one-hot numeric tensor to serve as input for deep neural networks.
 - Developed a scalable Reinforcement Learning pipeline supporting parallel multiprocessing across multiple CPU cores, utilizing Maskable Proximal Policy Optimization (PPO) to dynamically restrict invalid action spaces.
 - Implemented Behavioral Cloning (Imitation Learning) to overcome exploration bottlenecks, successfully warm-starting a [512, 512] deep neural network with expert human data before applying careful hyperparameter fine-tuning to prevent catastrophic forgetting.
- ML and the Hurst exponent** | *Python, Pandas, NumPy, Scikit-Learn, yfinance* 2026
- Engineered a quantitative data pipeline to process historical SP500 data, extracting complex statistical features including 60 day rolling Hurst exponents via rescaled range (R/S) analysis and log-log linear regression.
 - Trained and audited a random forest classifier using Scikit-Learn, implementing strict walk forward validation (TimeSeriesSplit) to prevent data leakage, and conducted feature ablation studies to evaluate model robustness.
 - Built a realistic out-of-sample backtesting engine integrating 0.05% friction costs and probability confidence thresholds, achieving a 0.87 Sharpe Ratio and mitigating market exposure by holding cash for 35% of the trading period.
- Prediction Markets Portfolio Management** | *Python, SciPy, Streamlit, Plotly, REST APIs* 2026
- Engineered a live data ingestion pipeline interfacing with the Polymarket REST API to extract real time order books, calculate true bid-ask spreads, and evaluate the EV and annualized ROI of binary options.
 - Developed a risk management engine using SciPy to perform simultaneous Kelly Criterion optimization, dynamically sizing capital allocation based on the covariance matrix of correlated Bernoulli outcomes.
 - Deployed an interactive Streamlit dashboard featuring Plotly visualizations, including covariance heatmaps and optimal portfolio allocation charts, enabling efficient portfolio level risk management