EMIL BLAIGNAN

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EDUCATION

University of California, Los Angeles (UCLA)   **Los Angeles, CA**
Mathematics/Economics B.S. w/ Specialization in Computing   *Expected June 2026*
- **GPA:** 3.8/4.0 | Dean's List x2, Salutatorian, 17 APs, AP Scholar with Distinction x3
- **Relevant Coursework:** Calculus II/III, Differential Equations, Stochastic Processes, Linear Algebra, Probability/Statistics, Discrete, Python, C++, Monte Carlo, Microeconomic Theory, Econometrics, Accounting.

PROFESSIONAL EXPERIENCE

UCLA Design Media Arts (DMA)   **Los Angeles, CA**
Printlab Consultant   *November 2022 – Present*
- Led workshops, training, and equipment setup, enhancing operational efficiency and productivity by **80%**.
- Streamlined workflows by deploying **Adobe Creative Suite** via the cloud, improving operational efficiency by **20%**.
- Created software tutorials, contact sheets, and technical documentation using **LaTeX** for professional communication.

Top Shelf Comics & Books   **Los Angeles, CA**
Personal Online Business   *September 2021 – Present*
- Researched undervalued inventory, leveraging data-driven insights to capitalize on **5-20x arbitrage** opportunities.
- **Boosted sales by 80%** through **SEO-optimized listings** and data-driven platform strategies for competitive pricing.
- Managed end-to-end operations, including procurement, pricing, fulfillment, and customer engagement.

Event Photographer   **Los Angeles, CA**
Photographer/Videographer   August 2019 – Present
- Analyzed seasonal event trends and focused on graduation parties niche, leading to a **25%** increase in bookings.
- Designed and distributed business cards at events, resulting in a **75% boost** in client acquisition.
- Negotiated contracts and managed client relationships, ensuring a **100%** client satisfaction rate.

California Financial Partners   **Glendale, CA**
Wealth Management Intern   *July 2024 – September 2024*
- Analyzed large- & small-cap stocks using **CAPM** and **Sharpe** Ratio, projecting a **+4%** annual portfolio return increase.
- Identified small-cap outperformance driven by declining interest rates, optimizing client portfolio allocation by **30%**.
- Delivered executive presentations on small-cap research, influencing **$7.5M** in AUM reallocation.

PROJECTS

Yield Curve Modeling, Forecasting, and Risk Analysis   *January 2025 – Present*
- Developed an SQL data pipeline to process 20 years of historical US Treasury yield curve data from the **FRED API**.
- Designing 3D and heatmap visualizations in **Plotly** to analyze yield curve shifts and term structure dynamics over time.
- Implementing **LSTM time series forecasting** to predict curves up to 3 months, enhancing fixed-income risk analysis.

Automated Book Arbitrage   *February 2024 – Present*
- Developing a Python web scraper with **Selenium** to recognize book prices on various websites (i.e., HPB, WOB, ThriftBooks) and comparing prices of sold listings on eBay via eBay developer API to identify +5x arbitrage.
- Automate price, book image, and descriptions for listings via **eBay API** to increase operational efficiency by **10x**.

Efficient Frontier Visualization Tool with Sharpe Ratio Heatmap   *December 2024 – January 2025*
- Developed a **Python**-based Markowitz optimization tool leveraging **Monte Carlo simulations.**
- Constructed a risk-adjusted high-momentum portfolio (large-cap stocks & gold ETF) with **27% mean annualized return**, **12% volatility**, **1.9 Sharpe** ratio, and **0.65 beta**.
- Backtested portfolio on 10-year look-back, outperforming SPY by **126.8%** annualized returns & **52.9%** less drawdown.

TECHNICAL SKILLS

- **Languages:** C++, Python, R.
- **Frameworks:** NumPy, Pandas, Matplotlib/Seaborn/Plotly, SQL/DuckDB/Polars, Scrapy, JAX, and Keras.
- **Customer Service:** Experienced with inquiry resolution and effective communication.
- **Technologies:** Jupyter Lab, VS Code, QuantConnect, Excel, Adobe Suite.
- **Concepts/Interests:** Financial mathematics, modeling, data science, and machine learning.