

# DIEGO MONTEMAYOR

diegomontemayor.f@gmail.com | (561) 926-7345 | diegomontemayor123.github.io/portfolio

AI Researcher & Full-Stack Engineer / Ex-Wall Street VP, Yale Econ (Distinction)

## TECHNICAL PROJECTS & PRODUCT BUILDS

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### AI RESEARCHER & ENTREPRENEUR

New York, NY

#### Transformer-Based Portfolio Optimizer (PyTorch, Adam Optimizer, RandomForest)

Apr. 2024 – Present

- Optimized a Sharpe-maximizing portfolio allocator using transformer architecture.
- Created custom loss function to maximize risk-adjusted return with leverage penalties.
- Implemented Random Forest recursive feature elimination across training chunks to reduce dimensionality while preserving performance, enabling interpretable attribution in non-stationary time series.
- Achieved 2.6x outperformance, 25% lower max drawdown in backtesting (2017 - 2023) vs equal-weight benchmark.

#### Excel-Agent MCP Server (HuggingFace, LangChain, RAG)

- Engineered a Machine Context Protocol (MCP) server for intelligent Excel data extraction and querying.
- Deployed Retrieval Augmented Generation (RAG) pipeline with Facebook AI Similarity Search (FAISS) vector stores.
- Designed hybrid extraction pipeline combining rule-based table detection with OCR fallback, implementing adaptive chunking to preserve semantic structure across boundaries.
- Reduced manual data-entry by ~90% through semantic search over structured context from unstructured sources.

#### Recipe Sharing App (React Native, Node.js, MongoDB)

- Deployed a working prototype platform for recipe sharing with authentication, search functions, and messaging.
- Implemented React Native UI with chat previews, follow features, filter and sort options, and personalized feeds.
- Streamlined Node.js backend with token auth, image handling, threaded messaging, and category-based search.

## PROFESSIONAL EXPERIENCE

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### SIXTH STREET PARTNERS

New York, NY

#### Structured Credit Investor, Vice President and Associate

Jun. 2021 – Apr. 2024

- Led structuring and negotiation for 3+ CLOs financing \$1.2B+ in assets, optimizing deal structure and legal terms.
- Drove investment in CLO mezzanine, equity, and IG debt, helping grow platform AUM from \$1.3B to \$6B.
- Managed three portfolios independently while executing relative value analytics with Python and Excel.
- Spearheaded automation projects including API-driven stress-testing models and a portfolio review system, enhancing investment process efficiency end-to-end.
- Architected ESG investing policy, aligning investment standards with evolving regulatory frameworks.
- Secured \$100MM internal capital allocation by pitching liquid credit strategy to the firmwide capital committee.

### JP MORGAN CHASE & CO.

New York, NY

#### Credit Structuring Associate and Analyst

Jun. 2017 – May 2021

- Personally structured \$30B+ in CLO transactions across 60+ deals, coordinating with investors and legal counsel.
- Originated three new mandates through client relationship building and innovative structuring.
- Led financial modeling and legal negotiations for high-profile deals including OHA 5 (\$601MM) and Franklin Square's inaugural CLO.

## EDUCATION

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### YALE UNIVERSITY

New Haven, CT

#### Bachelor of Arts in Economics

May 2017

- GPA: 3.8; graduated with Distinction
- Empirical Thesis: *The Impact of Economic Growth on Environmental Degradation*
- Internships: JP Morgan Markets (Summer 2016) and Fairholme Capital Management (Summer 2015)
- Co-Captain and Treasurer, Yale Skeet and Trap; Board Member, Yale Social Investment Team

## ADDITIONAL INFORMATION

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**Machine Learning:** Transformers, PyTorch, Adam Optimizer, RandomForest, MCP, HuggingFace, LangChain, RAG, FAISS

**Programming Languages and Frameworks:** Python, JavaScript, TypeScript, React Native, Node.js, MongoDB, HTML, CSS

**Natural Languages:** English, Spanish (Native), German (Intermediate), Japanese (Beginner) | **Citizenships:** USA, Mexico

**Finance:** Structured Credit, Underwriting, Market Analysis, Transaction Modeling | **Certifications:** Series 7, 63, 79