

THEODORE PATSIS

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EDUCATION

University of California, Los Angeles (UCLA), Los Angeles, CA

September 2022-June 2026

Bachelor of Science in Computer Science, Minor in Mathematics

- Cumulative GPA: 3.9/4.0 (4 times Dean's Honors List)
- Upsilon Pi Epsilon (UPE) member – first and only international CS honor society

Relevant coursework: Data Structures & Algorithms, Discrete Structures, Algorithms and Complexity, Linear Algebra, Stochastic Processes, Probability & Statistical Inference, Akuna Options 201, Financial Mathematics: Options, Futures, Derivatives, Tech Management Technical Breadth

WORK EXPERIENCE

Athens Stock Exchange Group

June 2024-September 2024

Trading Systems Developer Intern

Athens, Greece

- Developed parser to extract the information of complex transaction logs, consisting of nested unions in C/C++, into a JSON object
- Actively contributed to a large codebase for handling trade orders, developed by the CME, during its porting from OpenVMS to Linux
- Refactored code to improve performance and **enable a higher number of trades by up to 25%**, in order to draw HFT firms to the exchange
- Facilitated debugging and comparison of the two different implementations using the parser as a reference, ensuring consistency

Cinelytic

January-April 2024

Software Engineering Intern

Los Angeles, CA

- Developed a Django-based web app which automatically extracts metadata and provides coverage for film scripts using various LLMs
- Managed the project in all stages, from brainstorming the initial idea to integrating the final product into the Cinelytic database
- Cut cost of analyzing a film script **by more than 100%**, product was presented at Cannes Film Festival to many interested studios
- Met daily with the company's CTO and people from a variety of disciplines, including screenwriters, software engineers and business executives in both formal and informal settings; Received a return offer from the CEO after working there in the summer of 2022

InSite Property Group

June -August 2023

AI Optimization Intern

Los Angeles, CA

- Initiated an ambitious project which used ML algorithms to automatically grade call center performance and give feedback; presented to cross-functional stakeholders including the company's operating partner, senior digital strategist and senior software engineers
- Used **time series analysis** to classify all incoming calls into sales/customer service with 95% accuracy & cluster clients into buyer personas
- Scraped all call center data from the RingCentral database in real time to achieve instant call grading, replacing the need for human annotators; developed a scalable model able to handle up to 3k calls daily
- Facilitated communication between technical and non-technical teams by translating complex technological concepts in weekly meetings

TECHNICAL PROJECTS

Euro 2024 Sports Betting | *Personal Project*

June-July 2024

Placed high EV bets and surebets using Modern Portfolio Theory principles and the Kelly Betting strategy; **achieved a 5x increase in initial capital**

BruinRide | *Created independently with a team of 5 people*

Jan 2024

Founded early-stage startup, a comprehensive ride-sharing web app which facilitates rides from five pickup locations near UCLA to LAX

Languages: Node.js, JavaScript, Express, React, Libraries/Technologies: Firestore Database, Google OAuth

Phnetphlix | *Created independently as a class project for CS 32 at UCLA*

February-March 2023

A tree multimap based movie recommender able to **accommodate 20K movies and 100K users**, with efficient searching and user database loading.

Languages: C++, Libraries/Technologies: STL's unordered map and unordered set, implemented my own version of a tree multimap

Insincere Quora entry classification ML model | *Created with my team under ACM AI Projects Track*

January-March 2023

Achieved a 95% accuracy using LSTM despite skewed dataset of **1.3 million entries** by cleverly upsampling the data.

Languages: Python, Libraries/Technologies: GloVe embeddings, PyTorch LSTM

ACADEMIC DISTINCTIONS & CERTIFICATES

- Scored 45/45 in IB Diploma; received Parents' Association Award and Computer Science Award by Athens College 2022
- Published "Computing Movie Script Similarity with Neural Word Embeddings," supervised by Cambridge's Dr. Advait Sarkar & presented work at the IEEE MIT Undergraduate Conference in Oct 2021 and at the CCIR Research Symposium in Feb 2022 2021

ACTIVITIES

Bruin Stock Group | *Quantitative Researcher*

January 2024 -present

Selected for quant division after rigorous interview process; Developing algorithms for precise market analysis to optimize trading strategies.

Hellenic Students' Community at UCLA | *Founding Member*

October 2022 - present

Organized events that promote the Greek culture and history on campus; Received fundraising from Stavros Niarchos Foundation (SNF).

SKILLS & INTERESTS

- **Programming Languages:** C/C++ (expert), Python (proficient), JavaScript (proficient), HTML/CSS (intermediate), Java (prior experience)
- **Software/Libraries:** Proficient in PyTorch, Pandas, Git, Emacs & Linux OS. Intermediate in Firebase & React, Bash, Lisp, GDB, valgrind. Experienced with CMake configuration methods and Catch2 testing framework. Knowledge of distributed systems & network programming.
- **Finance:** Fundamental & Technical Analysis, Bond Valuation, Greek State's "Hercules" NPL securitization scheme, Time Series Analysis, MOAT analysis, Black-Scholes-Merton Model, DCF Valuation, Efficient Frontier, CAPM Model, Kelly Betting.
- **Personal portfolio:** Invested in US equities and distressed assets such as Greek non-performing exposures. Portfolio **up 45% YTD**
- **Languages/Sports:** Fluent in English and Greek, Intermediate in German and French, Tennis, Fencing, Alpine Skiing, Scuba Diving
- **Interests:** Poker, Numismatics, Traveling, Harry Potter franchise, Christopher Nolan movies, Electronic music, Meeting founders