

# DAVID O. PASCUAL

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## EDUCATION:

Syracuse University, College of Engineering and Computer Science

Expected Graduation May 2028

B.S. in Computer Science and Mathematics

Related Coursework: Linear Algebra, Calculus I, II, & III, Fundamentals of Computing and Programming, Introduction to Abstract Mathematics

## SKILLS:

Programming: Python, JavaScript, SQL, Node.js, C++, C

Tools & Libraries: Jupiter Notebooks, Pandas, Alpaca API, Scikit-Learn, TensorFlow, Git, VSCode, AWS, PyCharm, IntelliJ, React.js

Core Skills: Model Development, Machine Learning, Feature Engineering, Backtesting, Data Analysis

## WORK EXPERIENCE:

### Undergraduate Researcher

Syracuse, New York

December 2024 - Present

- Conducting research under Professor Reza Zafarani at Syracuse University to investigate memory mechanisms of large language models (LLMs) and study similarities to human memory processes. Responsibilities include designing queries, analyzing model outputs, and contributing to theoretical insights into artificial intelligence cognition

### Undergraduate Researcher

Syracuse, New York

December 2024 - Present

- Conducting research under Professor Si Cheng at Syracuse University, focusing on machine learning applications in finance. Responsibilities include data analysis, algorithm development, and exploring innovative solutions to financial modeling challenges.

### Assistant

New York, New York

June 2024 - August 2024

- Coordinated procurement of necessary materials, liaising with vendors to place orders and trace deliveries
- Administered in assembly and production of custom lighting units to meet client specifications
- Handled countering of important documents and materials, ensuring prompt and secure delivery to clients and stakeholders

### Assistant Property Manager

New York, New York

June 2022 - August 2022

- Offered administrative and operational management of a real estate portfolio covering 700,000 square feet of commercial properties in New York and Republic of Ireland
- Supervised document preparation, including copying, filing, and maintaining accurate records for real estate transactions
- Handled phone communications, responding to inquiries and providing assistance as needed
- Organized and distributed incoming mail, ensuring timely delivery of important correspondence
- Managed courier services for delivering critical documents securely and on time
- Utilized in creating Excel templates to efficiently summarize and analyze data for portfolio performance tracking

### Assistant Counselor

Mamaroneck, New York

June 2023 - August 2023

- Facilitated efforts to bridge systemic gaps, ensuring equitable access to STEM education for disadvantaged children

## PROJECTS:

### Lead Developer

Syracuse, New York

October 2024 - Present

- Developed SU Health Tracker, an interactive web application for tracking health data across Syracuse University buildings. Implemented dynamic maps with custom markers, report submission, and real-time data visualization using React, Leaflet.js, OpenStreetMap, and JavaScript

### Personal Project

Syracuse, New York

October 2024 - Present

- Designed and deployed a machine learning-driven trading system to generate real-time buy/sell signals based on market data analysis
- Data Collection: Aggregated extensive historical and real-time data to identify trends
- Feature Engineering: Created predictive features, addressing class imbalance for robust signals
- Model Training: Applied ML algorithms, enhancing predictive accuracy
- Backtesting: Validated model performance with rigorous historical testing
- Live Trading: Integrated with Alpaca API for seamless trade execution