Aaron M. Stahl

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Inquisitive, detail-oriented, and collaborative computational scientist and investment professional with ten years of experience, including four years in investment management and six years advancing research in computational physics. Skilled in analytical modeling, machine learning, data analysis, finance, client relations, and teamwork. Talented, effective communicator to technical and non-technical audiences alike, with a rich history of teaching, advising, and leadership.

SELECTED EXPERIENCE

RESEARCH AFFILIATE — MAY 2024 — PRESENT
School of Earth & Atmospheric Sciences, *Georgia Institute of Technology* | Atlanta, GA

- Conduct NASA-funded research in computational space physics within the solar system; provide mentorship to doctoral and undergraduate researchers and help guide the MOSS group's strategic research directions.

GRADUATE RESEARCH SCIENTIST — AUG 2018 — MAY 2024
School of Physics, *Georgia Institute of Technology* | Atlanta, GA
Awards: Herbert P. Haley Fellowship, Georgia Tech Quantum Alliance Fellowship

- Programmed numerical models in C++ to study space physics at Jupiter's largest moons in distributed computing environment; published peer-reviewed articles on research results in leading space physics journal.
- Translated broad scientific research goals into quantitative questions that could be answered by combining simulated model results with empirical data (e.g., *in situ* spacecraft time-series measurements).
- Applied statistical techniques (e.g., minimum variance analysis, multivariate regression, distribution sampling) to large, complex datasets to extract key signatures of space plasma interaction dynamics using Python.
- Spearheaded a collaborative research project on recent NASA mission to Jupiter, resulting in a cover-story article in top geophysical journal; mentored several new graduate and undergraduate students, helping them establish research objectives and computational modeling experience.
- Leveraged machine learning and artificial intelligence techniques to enhance data integrity and completion, employing Python and TensorFlow to develop adaptable models for use across data science and physics.
- Presented scientific results to both highly specialized and general audiences at several invited talks, including corporate (Google Quantum AI), student (GT Quantum Alliance), and international scientific bodies (AGU).

ANALYST — OCT 2008 — SEP 2011
Strategic Investment Group, LLC | Arlington, VA

- Collaborated with asset class managers and head portfolio manager to select optimal investments for large institutional portfolios (>\$1 bil) spanning all asset classes through the application of investment analysis, asset allocation techniques, financial data analysis, and manager due diligence.
- Addressed multifaceted investment challenges, including managing complex cash flows, liquidity demands, and tax issues, by deploying a mix of active and passive investment strategies tailored to specific policy mandates.
- Oversaw performance metrics, risk assessments, and benchmarking analyses for key clients, ensuring accurate reporting and proactive client engagement through regular presentations an analytical discussions.
- Led development of new data analytics pipeline for firm-wide futures trading; won annual "Brilliant-α" award.

EDUCATION

PhD IN PHYSICS, GEORGIA INSTITUTE OF TECHNOLOGY	MAY 2024
BS IN PHYSICS, UNIVERSITY OF MARYLAND - COLLEGE PARK	MAY 2018
BA IN BUSINESS, UNIVERSITY OF SOUTHERN CALIFORNIA	MAY 2008

SKILLS & DEVELOPMENT

PROGRAMMING: Python • C++ • SQL
COMPUTATIONAL TOOLS: SciPy | NumPy • Pandas • Matplotlib • PyTorch • TensorFlow | Keras • Git
FINANCE: Time series analysis • Portfolio optimization • Monte Carlo • Bloomberg • MS Office | VBA
PROFESSIONAL DEVELOPMENT: Series 65 • CFA Level I Candidate (Nov. 24)

SELECTED PUBLICATIONS

A complete list of publications and talks can be found in my CV on my website: https://astahl3.github.io/cv/

[1]   Aaron Stahl et al. "A Model of Ganymede's Magnetic and Plasma Environment During the Juno PJ34 Flyby". In: *Journal of Geophysical Research: Space Physics* 128.12 (2023), e2023JA032113.