

Ryan Marin

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EDUCATION

Princeton University, Physics, A.B.

2021 – 2025
Princeton, NJ

- **GPA:** 3.7
- **Awards:** *Manfred Pyka Memorial Physics Prize (x2)*: given to outstanding Physics undergraduates for excellence in course work (2022, 2023)
- **Relevant Coursework:** Statistical Mechanics, Quantum Field Theory, General Relativity, String Theory, Stochastic Processes, Differential Geometry, Complex Analysis, Algebraic Geometry, Algebraic Topology
- **Activities:** Charter Club, Climbing Team, Whig-Clio, Rock Ensemble

San Juan Hills High School, General Studies, Valedictorian

2017 – 2021
San Juan
Capistrano, CA

- **GPA/ACT/SAT:** 4.000/4.924, 36/36, 1580/1600
- **Awards:** U.S. Physics Olympiad *Semifinalist* (2020), *National AP Scholar* (2021)

FINANCE

Jane Street, Quantitative Trading Intern

2024
New York City, NY

Over the course of 11 weeks, developed projects on two desks and attended daily courses on algorithmic trading & mathematical modeling

Options:

- Developed functional regression techniques to detect structural misalignments in event-driven volatility surfaces

Domestic ETFs

- Developed a predictive algorithm to trade on interest rate fluctuations in tax instruments

Tiger Capital Management, Analyst; Technology (2021), Industrials & Energy (2022)

2021 – 2023
Princeton, NJ

- Produced company models, DCFs, wrote and pitched stock evaluations
- Balanced portfolio for largest, oldest fund at Princeton (>150k AUM)

RESEARCH

Thesis, Undergraduate Research

Jun 2024 – present
Princeton, NJ

- Thesis Topic: Nonfactorization in AdS_2 Quantum Gravity
- Written under the mentorship of Juan Maldacena, *Carl P. Feinberg Professor*, Institute for Advanced Study

Junior Paper, Undergraduate Research

2023 – 2024
Princeton, NJ

- Topic: " C^k -regular extremal black holes in maximally-symmetric spacetime and the third law of black hole thermodynamics"
- Written/Published under mentorship of Mihalis Dafermos, *Professor*, Princeton U. department of Mathematics

Junior Paper, Undergraduate Research

2024
Princeton, NJ

- Title: "*Toward a resolution of the black hole information paradox: the quasi-analytic transition between self-gravitating strings and black holes*"
- Literature review written under Nissan Itzhaki, *member*, School of Natural Sciences, Institute for Advanced Study

Summer Project, Undergraduate Research

2023
Mission Viejo, CA

- Research/Studied stability of Myers-Perry $4+i$ black holes via superradiance and null geodesic trapping
- Mentored by Dr. Gabriele Benomio, *Postdoctoral Fellow*, Princeton U.

MISCELLANEOUS

Languages: English [Native], French [C1], Chinese (普通话) [B1], Akkadian (Old Babylonian) [A2]

Technical Skills: Python, Java, LaTeX, Excel, Mathematica, MATLAB

Interests: Linguistics, Rock Climbing, Jazz, Aviation, Category Theory, Metaphysics