

EDUCATION

University of Pennsylvania, School of Engineering and Applied Science

Expected Graduation: May 2026

BSE in Systems Science and Engineering

Minors in Mathematics, Engineering Entrepreneurship, and Statistics and Data Science at the Wharton Business School

- Relevant Courses Taken: Calculus Part III (Math 2400), Programming Languages and Techniques (CIS 1200), Decision Models (ESE 2040), Introduction to Dynamic Systems (ESE 2100), Intro to Microeconomics (ECON 0100), Intro to Macroeconomics (ECON 0200), Entrepreneurship and Technology (MGMT 2670), Venture Capital and Entrepreneurship (MGMT 2640), Engineering Probability (ESE 3010), Introduction to Python for Data Science (STAT 4770), Judgment and Decision making (PSYC 2737), Deutsches Haus (GRMN 1800)
- Fall 2024 Courses: Financial Derivatives (FNCE 2170), Stochastic Systems Analysis and Simulation (ESE 3030), Engineering Entrepreneurship I (EAS 5450), Introduction to Optimization Theory (ESE 5060), Statistics for Data Science (ESE 4020), Advanced Linear Algebra (Math 3140)

Runnymede College High School Diploma

2007 - 2022 (Madrid, Spain)

- A-Level's: A* in Mathematics, A in Further Mathematics, A in Physics and B in German
- IGCSE's: 6 A*'s (Mathematics, Physics etc.), 2 A's, 3 B's. SAT: 1480 (800 Math, 680 English)

Awards: British Physics Olympiad (BPhO): Gold and Bronze certificates; Duke of Edinburgh Program: Bronze Award

PROFESSIONAL EXPERIENCE

Perelman School at UPenn– Research Assistant

May - Current (Philadelphia, PA)

- Working in the largest FAA-funded sleep study ever done on the Effects of Aircraft Noise on Sleep Patterns
- Analyzing large datasets using MATLAB, and applying statistical methods to identify patterns and correlations

EY – Engineering Intern at the Artificial Intelligence center at EY Wavespace

June - July 2023 (Madrid, Spain)

- Worked on the development of an ESG reporting management platform using Python, managing data for over 100 companies. Taught me the importance of sustainable reporting and data management in the context of consulting
- Gained hands-on experience with NLP techniques focusing on document intelligence and analytics, by learning to apply parsing, normalization, and NER models like Conditional Random Fields for effective text extraction of financial documents. Improved my understanding of leveraging AI to enhance general data analysis practices

Insigneo Securities (brokerage and advisory services in LATAM) – Structured Products Intern

May 2023 (Miami, FL)

- Gained an in-depth understanding of structured notes, including zero-coupon bonds and derivatives for capital protection and enhanced returns. Improved my ability to match financial products with investor risk-return profiles
- Developed an understanding of utilizing options strategies within structured notes, particularly in implementing call and put options for hedging and volatility management, adapting investments to varying risk tolerances and market forecasts
- Learned about portfolio risk-return evaluation using Spearman's rho, implied volatility analysis, and interest rate considerations. Attended financial advisor meetings to better understand structured note creation and distribution

Opel Automobile - Intern at the Mechatronics and Metalworking Labs

July 2021 (Russelsheim, Germany)

- Repaired cars with the guidance of local engineers. Changed suspension springs by using Hooke's law, dismantled starters and reassembled them thus understanding how their magnetic field worked.

ACADEMIC ACHIEVEMENTS, LANGUAGES & COMPUTER SKILLS

VIP-C Program: Venture Labs, Co-founder

2023 - Current (Philadelphia, PA)

- Working alongside three Penn students on a dating app, we have finished the UI design, collected feedback through a pre-prototype simulation with 43 diverse test users and are currently finishing up the Frontend in Swift

CERN Beamline Competition Club President

Spring 2021 (Madrid, Spain)

- Formulated a proposal to explore the proton internal quark structure. The paper was then presented to scientists at CERN

Computer skills: Python (Proficient), Java (Proficient), OCaml (Proficient), NumPy (Proficient), Pandas (Proficient), Time Series Analysis, Machine Learning, Wolfram Mathematica, R (Basic), MS Office Suite, Autodesk software

Languages: Spanish (Native), English (Bilingual), German (Fluent), French (Basic level)

INTERESTS & COMMUNITY SERVICE

Associated Board of the Royal Schools of Music (ABRSM) Piano Student, Grade 6

2010 - Current (Madrid, Spain)

Judo Club Blanco Black belt 1st Dan, 15 years of training. Regional competitions

2007- Current (Madrid, Philadelphia)

Bobath Brain Palsy Foundation Volunteered for over 400 hours through academic tutoring

2016 - 2019 (Madrid, Spain)

Phi Gamma Delta Fraternity Philanthropy Deputy

2024 - Current (Philadelphia, PA)

UPenn IM Latino FC Soccer Team Supported by Wharton, we united the Latino Community

Fall 2022 (Philadelphia, PA)

Runnymede Soccer Team Ranked 2nd in the 2019 State Championship

2015 – 2021 (Madrid, Spain)

Penn Spain Leading the social committee

August 2023 - Current (Philadelphia, PA)