Peter A. Sayegh

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EDUCATION

- **Columbia University** — New York, United States
  Master of Science in Electrical Engineering — *August 2025 - Present*

- **École Polytechnique** — Palaiseau, France
  Bachelor of Science in Mathematics and Physics (GPA: 3.75/4.0) — *September 2022 - June 2025*
  Supplementary coursework in Computer Science

- **Lycée Louis-Le-Grand** — Paris, France
  French Baccalaureat, Highest Honors / "Mention Très Bien" - Class President — *September 2020 - June 2022*
  Concentrations: Mathematics with Higher Mathematics, Physics & Chemistry, Earth and Life Sciences
  Honorable mention at the IPhO French national selection test in June 2022

COURSES

- **Mathematics**: Analysis, Linear Algebra, Probability, Statistics, Convex Optimisation and Optimal Control, Stochastic Processes
- **Physics**: Mechanics, Electrodynamics, Wave Optics, Quantum Physics, High Energy Physics, Thermodynamics and Statistical Physics, Condensed Matter Physics
- **Computer Science**: Python I, Python II, Algorithms, Numerical Analysis, Web Programming, Object-Oriented Programming in C++, Machine Learning

EXPERIENCE

- **Laboratoire d'Hydrodynamique - École Polytechnique (LadHyX)** — Palaiseau, France
  Bachelor Thesis research internship — *January - March 2025*
  - Applied advanced theoretical models to describe the complex dynamics of viscous fluids and ocean surface waves
  - Developed a Physics-Informed Neural Network (PINN) framework to solve the nonlinear Schrödinger equation and compared with traditional spectral methods

- **TriSpan LLP** — New York City, United States
  Private Equity Intern — *July - August 2024*
  - Streamlined Profit & Loss reporting by analyzing and simplifying financial statements.
  - Conducted financial modeling to value targets, including leverage buyout, public competitors, and precedent transactions analysis
  - Identified national investment opportunities and prepared detailed presentation decks.
  - Drafted detailed valuation reports for portfolio companies in the restaurant industry.

- **Laboratoire des Solides Irradiés (LSI) - École Polytechnique** — Palaiseau, France
  Research project in laboratory (physics) — *January - June 2024*
  - Conducted research in the field of nonlinear acoustics at the nanoscale
  - Applied advanced theoretical models to describe the complex dynamics of acoustic waves
  - Developed computational techniques to simulate and analyze the interactions of acoustic waves in realistic scenarios

TECHNICAL SKILLS

- **Programming Languages**: Python, C++, Arduino, R, MATLAB
- **Web Development and User Interface**: HTML, CSS, JavaScript, QML
- **Data Science and Machine Learning**: numpy, scipy, pandas, scikit-learn, statsmodels, matplotlib, tensorflow, keras, jax, optax
- **Physics**: QuTiP, Scikit-HEP, PySpice

LANGUAGES AND CERTIFICATIONS

- **Languages**: French (native), Arabic (native), English (fluent), German (B2), Spanish (A2)
- **MathWorks**: MATLAB Onramp
- **Wall Street Prep**: Accounting & Financial Statement Analysis
- **Udemy**: Signals and Systems: From Basics to Advance

VOLUNTEERING

- **Participated in the *Race Against Hunger* in collaboration with *Action contre la Faim***: 2015 - Present
- **Organized an awareness campaign about education in-partnership with *Action-Éducation* (formerly *Aide et Action*) on campus**: April 2023
- **President of the Mental Health committee, in charge of organizing the Mental Health Awareness Week**: May 2023 - September 2024