

# Peter A. Sayegh

Email: peter.sayegh@polytechnique.edu, pas2232@columbia.edu

Mobile: +33 7.88.79.86.94

Website: <https://peter-sayegh.github.io/my-portfolio/>

## EDUCATION

---

- **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"* 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*
- **Grand Lycée Franco-Libanais** Beirut, Lebanon  
*Honors award certificate in June 2019* September 2007 - June 2020

## 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.
  - Wrote and edited valuation reports for restaurants mostly owned by the company.
- **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
- **Self-employed** Paris, France  
*Private instructor for high school and freshman students in mathematics and physics* October 2021 - June 2024
  - Provided private instruction to enhance academic performance or prepare for upcoming tests
  - Prepared lesson plans following a specific program according to students needs and goals
  - Developed teaching material, such as handouts and exercise sheets
- **BBP Real Estate Agency** Paris, France  
*Intern* June - July 2023
  - Assisted with the search of prospective real estate using several websites
  - Contacted agencies and individual owners to schedule apartment visits
  - Interacted with clients to find the property that meets their standards at most
- **Lycée Louis-Le-Grand** Paris, France  
*Student representative* September 2021 - June 2022
  - Represented my fellow classmates' interests as a constant link with the administration

- **Banque Misr Liban (BML)**
  - *Banking Intern*
    - Assisted with customer engagement
    - Developed a solid and global understanding of the customer-employee relationship
    - Collaborated with employees to satisfy clients' requests

Beirut, Lebanon  
*February 2020*

## LANGUAGES

---

- **French:** native
- **Arabic:** native
- **English:** fluent
- **German:** B2
- **Spanish:** A2

## TECHNICAL SKILLS AND INTERESTS

---

- **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
- **Formatting:**  $\LaTeX$

## ONLINE CERTIFICATIONS

---

- **MathWorks:** MATLAB Onramp
- **Wall Street Prep:** Accounting & Financial Statement Analysis

## 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