

# Aurelian Andrei Panait

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## PROFILE

MSc student at MINES Paris – PSL with strong analytical and financial modelling skills, and experience in market analysis, scenario and sensitivity analysis, and financial decision support in complex market environments.

## EDUCATION

### MINES Paris – PSL

*Master's of Science in Energy Engineering*

Paris, France

Feb 2025 – Dec 2026

- Grade: 14.66/20; Major: Renewable Energy Integration & Energy Efficiency.
- Strong quantitative focus including financial analysis, statistics and data-driven decision support, with applications using Python.

### Politehnica University of Bucharest

*MSc in Computational Modelling (Renewable Energy) | Concurrent Programme*

Bucharest, Romania

Oct 2024 – Jun 2026

- First-Class Honours (94%); Quantitative focus on modelling, statistics and data-driven analysis applied to energy systems.
- Developed structured analytical approaches to assess performance, risk and uncertainty.

### Politehnica University of Bucharest

*Bachelor of Science, Energy Engineering*

Bucharest, Romania

Oct 2020 – Jul 2024

- First-Class Honours (85.7%); ranked in the top 10% of the cohort.
- Solid foundation in advanced mathematics, physics, economics, statistics & probability.

## PROFESSIONAL EXPERIENCE

### MINES Paris-PSL

*Research Intern – Data Modelling & Analytics (Energy Systems)*

Paris, France

May 2025 – Aug 2025

- Developed quantitative thermal-hydraulic models of SMR components, including a lumped 3-node steam generator model in Python.
- Analysed transient behaviour, time constants and operational constraints affecting SMR flexibility.
- Applied Runge–Kutta numerical integration to simulate dynamic system responses under uncertainty.
- Delivered a comparative assessment of SMR technologies (iPWR, HTGR, MSR, LFR), focusing on safety systems and grid integration.

### Tinmar Energy

*Proprietary Trading Intern*

Bucharest, Romania

Jul 2024 – Oct 2024

- Executed proprietary trades across CSEE and German power markets, covering calendar, monthly and hourly electricity contracts.
- Built and calibrated fundamental forecasting models using fuel spreads, RES forecasts, temperature anomalies and load curves.
- Designed scenario, sensitivity and stress-testing frameworks to assess portfolio risk, volatility drivers and downside exposure.
- Supported trading decisions through P&L attribution, risk analysis and data-driven insights using Python and Excel.

*Energy Trading Analyst Intern*

Jun 2023 – Oct 2023

- Supported short-term proprietary trading on Day-Ahead and Intraday power markets through load forecasting and market analysis.
- Analysed price, volume and demand drivers to identify execution gaps and inform trading decisions.
- Contributed to the development of a short-term load forecasting model using Double Seasonal Exponential Smoothing (DSES).

### Spectro Optica Zeiss

*Optical Technology Engineer*

Bucharest, Romania

Mar 2020 – Jun 2023

- Applied rigorous quality control and validation procedures to ensure accuracy, reliability and compliance with technical standards.
- Conducted analytical assessments to identify errors, minimise deviations and support risk-aware operational decisions.

## PROJECTS

### MINES Paris-PSL

*Developer and Team Lead*

Paris, France

Dec 2025 – Jan 2026

- Analysed how fuel price fluctuations transmit into electricity prices, assessing cost drivers, volatility and market dynamics.
- Evaluated the role of renewable energy penetration in mitigating price volatility and reducing exposure to fossil fuel price risk.
- Worked with generative models to understand data distributions and support data automation and document processing use-cases.

## SKILLS

**Corporate Finance & Market Analysis:** Financial performance analysis, value driver assessment, scenario and sensitivity analysis, market and competitive analysis

**Data & Quantitative Analysis:** Forecasting, statistical analysis, time-series methods, risk and deviation assessment

**Programming & Tools:** Excel (advanced), PowerPoint, Python (NumPy, Pandas, SciPy), SQL

**Languages:** Romanian (native), English (C2), French (B2), Italian (A1), Chinese (A1)

## AWARDS & HONOURS

**Merit Scholarship:** *Bachelor of Science in Energy Engineering, Politehnica University of Bucharest*

2020 – 2024

**Merit Scholarship:** *MSc in Computational Modeling, Politehnica University of Bucharest*

2024 – 2025

**Excellence Scholarship:** *Academic mobility and studies at MINES Paris – PSL*

2025