Antonije Mirkovic

antonije@mirkovic.no | linkedin.com/in/amirkovic | mirkovic.no

Education

Norwegian University of Science and Technology Norway

Integrated M.Sc. Physics and Mathematics – Specialization in Industrial Mathematics *2023 – present*

- Accelerated track: Completed advanced third-year mathematics courses (functional analysis, abstract algebra, complex analysis) within first year; consistently top grades.
- Coursework: Stochastic Modeling, Probability Theory, Optimization, Machine Learning, Algorithms

Awards

Accepted into Jane Street Zurich Portal – 2025

Top 1% in the Norwegian Mathematical Olympiad Qualifications (Abel Competition) – 2021

Invited to Y Combinator's private YC x Paris event – 2025

Qualified for Norwegian Bench Press Championship – 2024

Experience

Alumco 2025

Founding Software Engineer

- Developed and iterated 8 AI product builds, applying rapid prototyping and statistical A/B testing to optimize and analyze user engagement (1000+ customers, 3M+ views).
- Engineered and deployed 2 production-grade platforms, translating algorithms into code and optimizing for scalability and real-time performance.
- Built forward-deployed feedback agent in 4 days, leveraging context engineering and applied machine learning to improve real-time prediction accuracy and user interaction.

Norwegian Armed Forces 2021 – 2022

Combat Engineer

- Developed strong decision-making skills under pressure and worked collaboratively in high-stakes environments.
- Led small technical units on complex engineering tasks, honing precision, discipline, and collaboration under high pressure conditions.

Projects

Cardinality-Constrained Portfolio Optimization | *Python, SciPy, CVXPY, Mixed-Integer Optimization* 2025

- Implemented Δ-CCMV algorithm for efficient frontier analysis under cardinality and transaction cost constraints; evaluated portfolio performance and allocation strategies.

High Frequency Crypto Trading Strategy | *Python, Pandas, NumPy, Matplotlib* 2024

- Developed, backtested and automated a BTC–SOL correlation trading strategy using slippage modeling and ATR-based take-profit logic; generated consistent returns passively while attending classes.

ECG Arrhythmia Tracker | *Python, TensorFlow, NumPy, Next.js, Expo* 2025

- Built a full iOS app for real-time PVC detection and burden calculation, integrating 1D CNN for time-series classification and live ECG visualization.
- Tested with real ECG data streams, achieving reliable PVC burden estimation and providing practical health insights to help people with heart conditions stay safe during workouts.

Skills

Languages: Python, C++, R, Julia, TypeScript, JavaScript, React
Technologies: NumPy, Pandas, SciPy, CVXPY, TensorFlow, Matplotlib, Qiskit, Next.js
Mathematics: Probability Theory, Statistics, Stochastic Modeling, Time-Series Analysis, Optimization, Machine Learning, Scientific Computing, Linear Algebra, Functional Analysis, Measure Theory