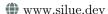
Bram Silue

▽ bram@silue.dev





Artificial Intelligence Lab Brussels

Brussels, BE

Doctoral Researcher

2023 - Now

- Research and development of novel reinforcement learning algorithms with improved sample efficiency for multi-objective decision-making in computationally intensive stochastic models.
- Teaching assistance for a final-year undergraduate-level Bayesian statistics course, involving course development, instruction, and student guidance.

EDUCATION

Doctor of Philosophy (PhD) in Machine Learning

Brussels, BE

Vrije Universiteit Brussel

2023 - Now

Master of Science (MSc) in Engineering – Computer Science

Brussels, BE

Vrije Universiteit Brussel

2020 - 2023

- Honors: magna cum laude.
- Cumulative GPA: **4.0/4.0**.

Bachelor of Science (BSc) in Engineering – Electronics & IT

Brussels, BE

Vrije Universiteit Brussel

2016 - 2022



Optiver Challenge – 1st place

Edinburgh, UK

THE UNIVERSITY OF EDINBURGH

Mar 2024

• Developed a trading system in Python that competed and won against 20 other teams. The system employs a market-making strategy and leverages sentiment analysis via machine learning to execute directional trades in anticipation of market movements triggered by news.

Notable Projects

Mean-Reverting Portfolio Modeling

SKILLS: PYTHON (PANDAS, NUMPY, SCIPY, MATPLOTLIB)

• Engineered a stochastic model to simulate and analyze the mean-reverting spread between financial assets, utilizing a customized Ornstein-Uhlenbeck process. This includes parameter estimation, improved model fitting for higher-order moments, and Monte Carlo simulations for strategic forecasting.

Limit Order Book Market Making

SKILLS: PYTHON (NUMPY, SCIPY, THREADING, FLASK, REQUESTS)

• Implemented a synthetic stock market server that runs a limit order book matching engine and handles order requests from market participants, including a market maker agent. The engine simulates a dynamic market environment by processing randomly incoming limit and market orders, resulting in a mid-price that mimics a Brownian motion. The market maker agent, meanwhile, continuously places quotes around the mid-price to provide liquidity, making a steady profit in the process.

₽ Profile Overview

Technologies: Python, Git, Unix, LATEX.

Languages: English (fluent), Dutch (native), French (native), German (intermediate). **Personal Interests:** Music Production, Automotive Industry, Fitness, Horology, Investing. **Professional Interests:** Quantitative Trading, Machine Learning, Software Engineering, Research.