Magnus Hansson, Ph.D.

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Employment History

2023 – · · · ·
- **Postdoc in Quantitative Finance,** Stockholm University and Swedish House of Finance.
  - Research projects:
    - Applying NLP to analyze corporate governance (coauthors at LSE and UCL).
    - Evaluating arbitrage using quantum computing (coauthors at Bank of Canada).
    - Studying DeFi price impacts on Ethereum (coauthors at UPENN and UNC).
  - Developing and maintaining a Python package to parse Ethereum data.
  - Teaching blockchain technology.
- **Data Scientist,** Independent Consultant.
  - Using mathematical modelling and machine learning for data analysis at startups.
  - Developed a risk framework for smart contract liquidity built on the Kelly criterion.

2017 – 2018
- **Machine Learning Engineer,** Combine Control Systems.
  - Built and trained artificial neural networks for virtual engine testing.

2016 – 2016
- **Reseach Assistant,** Jönköping International Business School.
  - Programmed a GARCH-copula-based risk model for financial analysis.

2012 – 2014
- **Summer Analyst,** Nordea Bank.
  - Analyzed account structures and managed day-to-day corporate operations.

Education

2018 – 2023
- **Ph.D. Economics, University of Gothenburg**.
  Thesis title: *Decentralized Finance and Central Bank Communication.*
  - Research projects:
    - Analyzed arbitrage on Ethereum by parsing raw Ethereum node data.
    - Evaluated price discovery on Ethereum trading exchanges.
    - Used NLP to explore trends in central bank communication.
  - Visiting researcher at Stockholm School of Economics.

2016 – 2017
- **M.Sc. Economics, Lund University**.
  Thesis title: *On Stock Return Prediction with LSTM Networks*.
  - Focused on quantitative finance and machine learning.

2014 – 2017
- **B.Sc. Mathematics, Lund University**.
  Thesis title: *Feedforward Neural Networks with ReLU Activation Functions are Linear Splines*.
  - Focused on numerical analysis and machine learning.

2011 – 2014
- **B.Sc. Economics, Jönköping International Business School**.
  Thesis title: *Does Increased Agglomeration Lead to Higher Matching on the Labor Market?*
  - Exchange semester at the University of St.Gallen.

Skills

Methods
- Machine Learning, Deep Learning, NLP, Statistics/Econometrics, Time Series.

Coding
- Python, R, Julia, SQL, Bash, Matlab, Stata.

Dev Tools
- Git, Vim, Linux (sysadmin, Arch + i3), Containers.