

# Marcél Busschers

MSc Student & A.I. Freelancer



## About me

Born and raised in Cape Town, South Africa; native in English and can speak Dutch at a respectable level. Affinity in Computer Science and Data Science, specialising in Artificial Intelligence and Machine Learning. Can work well independently as well as collaboratively. Additional affinity with researching and reporting. Currently finishing up my MSc in Bath, and have TU Delft on hold whilst I job hunt.

## personal

Marcél Busschers  
Dutch, British, South African  
8 September 1999

## Areas of specialization

A.I. • Machine Learning • Data Engineering • Computer Science • Quant Trading

## Interests

Endurance Running, Formula 1, Gaming, IOS Development, FX Trading, IoT Systems, A.I. Technologies

## Skills

Data Science & Analytics, Python, PyTorch, Pandas, Machine Learning, Git, APIs

Critical Thinking, Financial Knowledge, Reports, Research, Presentations.

- [marcelbusschers](#)
- [Marcel-Busschers](#)
- [Busschers AI](#)
- [Bio](#)

## EDUCATION

2022–2025

### MSc Artificial Intelligence

UNIVERSITY OF BATH · Bath, United Kingdom

Distance Learning, part-time taught master focused solely on Artificial Intelligence.

Topics include: Programming for AI, Mathematics for AI, the Foundations of AI (core concepts and ideologies), Applications of AI (in society and firms), bridge between humans and intelligent machines, Natural Language Processing, AI Systems Engineering, formal understanding of AI (computationally and under research), Deep Learning, Reinforcement Learning, Robotics and Machine Vision.

Currently undergoing dissertation. Flexibility in having it completed quicker at full-time pace, or longer at part-time pace.



2021–hold

### MSc Computer Science

DELTU UNIVERSITY OF TECHNOLOGY · Delft, Netherlands

Currently have this programme on hold



Full-time degree, specialising in Artificial Intelligence Technology

A research master focused on AI. Completed courses include: AI Techniques, Machine Learning 1, Machine Learning 2, Deep Learning, Data Visualisation, as well as a research project for Social Signal Processing.

2018–2021

### BSc Computer Science

VRIJE UNIVERSITEIT AMSTERDAM · Amsterdam, Netherlands

Concluded with a minor in Data Science; involved data pre-processing, wrangling, analysis and privacy (GDPR etc.). Also included Information Retrieval techniques, and Strategic Management of Technological Innovation for firms and society.



Bachelor Thesis was an MSc level project in the field of Machine Learning. Involved creating a Variational Autoencoder with Transformer architecture from scratch. Transformed the model from NLP to a financial data setting, and visualised the latent-space to analyse any patterns in financial market data.

2017

### High School Diploma

ELKANAH HOUSE · Cape Town, South Africa

<https://www.elkanah.co.za>



## LANGUAGES

### English

C2 mother tongue

### Dutch

C2

### Japanese

C1

### Spanish

A2

## PROGRAMMING

### LaTeX



### Python



### Pandas



### PyTorch



### Swift



### Tensorflow



### C/C++



### Java



## AI SPECIALISATIONS

- Reinforcement Learning
- Natural Language Processing
- Computer Vision
- Transformers
- Generative Modelling
- Time Series Forecasting

## CURRICULUM

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2024–present	<b>AI Engineering Freelancer</b> BUSSCHERS AI · Amsterdam, Netherlands 	
	Offer A.I. software solutions on a freelancing basis. Projects ranging in size, usually internal SaaS solutions for companies requiring sales/customer tracking; as well as generative chat-bot models used for companies landing sites.	
→	<b>AI Model Trainer</b> OUTLIER AI · San Francisco, U.S. (remote) 	
	Training AI models via participating in response tweaking/correcting, data adaptation, hyperparameter tuning, etc.	
Jan–Jun 2018	<b>FX Trader</b> VISIONARY TRADES GROUP · Cape Town, South Africa 	
	A start up trading company based in Cape Town, South Africa. This was a small position filled directly after high school, before moving to Amsterdam to study. Involved analysing markets and posting tips to alert-feeds for subscribers. Had to show proficiency in analysing certain markets based on percentage yields made with company funds.	

## CERTIFICATES

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- Jan 2021** MQL4: Development of trading bots for MetaTrader 4/5
- Jul 2018** IOS Development: Swift, UIKit, SwiftUI, Storyboards. Techdegree offered by TeamTreehouse, discontinued in 2018 before acquisition of certification. URL Archive: [Link Here](#)

## RESEARCH & PUBLICATIONS

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- 2024** *Exploring the Impact of Collaborative Games on Perceived Interpersonal Closeness in Romantic Partners*  
Investigates the role of a collaborative video game on the perceived interpersonal closeness of romantic partners before and after playing three rounds of the game. We examined the dyadic two-player game Overcooked! 2. - [CS4165](#)
- 2021** *Representing Market Data in Latent Space using a Transformer VAE*  
Variational Autoencoder will be created by making use of Transformer blocks to allow for a more accurate representation of sequential data; this model is then applied to a different set of sequential data, financial (market) data - [XB\\_40001](#)
- 2021** *Using Reinforcement Learning to Create a Forex Trading Bot*  
Build an autonomous foreign exchange (FX) trading agent that can learn how to trade and generate profits using a deep reinforcement learning algorithm named Proximal Policy Optimisation (PPO) - [X\\_400154](#)

## PROJECTS

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- 2024** *Enhancing Time Series Forecasting with Transformer-Based Reinforcement Learning Techniques*  
Current Master Dissertation
- 2023** *RL Project: Forex Market Prediction*  
Apply reinforcement learning (RL) to predict the next 5 to 10 candlesticks using forex historical data and optimise trading strategies based on these predictions.
- 2021** *Lecturing percentages: the agent way*  
Implementation of a conversational agent that teaches the user how to work with percentages. The agent notices the emotional state of the user and handles accordingly when wrong answers are given and frustration can happen. - [CS4270](#)