



Adam Ru Kun Dong

- COMPUTER SCIENTIST
- QUANT RESEARCHER

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Amsterdam, The Netherlands

HARD SKILLS

- **Data Analytics and Visualization** with Python and Matplotlib
- **Data Engineering:** data modelling, CI/CD, REST API
- **Machine Learning** in Supervised/Unsupervised/Reinforcement Learning
- **Quantitative Analysis:** Time-series modelling, Linear Regression, Monte Carlo Simulation
- **Financial Engineering** with C++
- **Automation** using n8n
- **AI Agent** Development
- **Parallel Programming** with CUDA, Multithread, and MPI

ABOUT ME

I am a data-driven Computer Scientist and CQF delegate dedicated to quantitative finance, systematic modelling, and high-performance data analysis. My experience ranges from building predictive models and simulation frameworks to engineering full-stack analytical systems. I aim to combine rigorous quantitative reasoning with strong programming skills to develop trading models and research tools that uncover signal in noisy, complex markets.

EDUCATION

BSc. Informatica (Computer Science)

Sep 2022 - Present

University of Amsterdam, The Netherlands

- Courses: Scientific Data Analysis, Statistical Reasoning (Machine Learning), Algorithm & Complexity, Distributed & Parallel Computing.
- **Minor Mathematical Themes:** Introduction Information Theory, Modern Cryptography, Verzamelingen en Getallen, Topology, Stochastic 1: Probability Theory.

PROJECTS

Risk-Sensitive Multi-Agent RL for Market Making (JaxMARL-HFT)

Present

Bachelor Thesis, UvA

- Developing **risk-sensitive reward functions** for market-making agents (exponential utility / entropic risk, mean-variance, CVaR-style tail-risk penalties) and integrating them into a **GPU-accelerated** multi-agent LOB simulator. (JaxMARL-HFT)
- Building a **modular reward API** and experiment configs to compare risk objectives while keeping the learning algorithm fixed (IPPO), enabling reproducible studies.
- Tech Stack: **Python, JAX**, GPU/JIT workflows, MARL (IPPO), limit order book microstructure, **statistical risk measures**.

Predicting Bitcoin Price Movements Using Public Sentiment

Dec 2025

Course Scientific Data Analysis, UvA

- Analyzed **cross-platform social sentiment** (1.2M Twitter, 890K Reddit) and market data to test whether **daily sentiment disagreement predicts next-day Bitcoin price instability**.
- Engineered **daily** and **7-day rolling disagreement features**, e.g., **MAD**, variance, std, **IQR**, and **Twitter-Reddit mean gap**
- Developed and validated **time-series OLS** regression models with an **AR(1) volatility baseline** plus disagreement predictors
- Achieved strong validation performance for next-day RV prediction, with best model having **RMSE \approx 0.010** and **MAE \approx 0.008**.
- Applied **Newey-West HAC robust standard errors (maxlags=7)** and ran **one-sided hypothesis tests**, finding **significant positive effects** for rolling disagreement
- Tech Stack: Python, Polars, time-series modeling, feature engineering, volatility estimation (RV/Parkinson), OLS regression
- Github: [arkdong/SDA25_Group11](https://github.com/arkdong/SDA25_Group11)

Centralized Vehicle Control for Traffic Congestion in Smart City using Agent-based Model

Jan 2025

Course Project Computational Science, UvA

- Enhanced highway traffic throughput by **67%** in simulation by implementing and evaluating centralized vehicle-takeover strategies. Flow improvement from \sim 1500 veh/h to \sim 2500 veh/h
- Developed **dynamic data visualization** and delivered a **research poster** and **elevator pitch** with excellent structure and quality, resulting a grade of **9/10**.
- Tech Stack: Python, NumPy, Matplotlib, Pandas, and Figma
- Github: [Laika404/ComputationalProject](https://github.com/Laika404/ComputationalProject)

SOFT SKILLS

- Analytical Thinking
- Problem Solving Mind-Set
- Data Driven
- Goal Oriented
- Adaptive Learner
- Collaborative
- Team Player

LANGUAGES

English - CEFR C1 - Advanced

Chinese - CEFR C1 - Advanced

Dutch - CEFR C1 - Advanced

HOBBIES

- Hackathons
- IOS App Development
- Open Source Contribution
- Tennis
- Cooking
- Musical
- Skiing
- Learning French

COURSES & CERTIFICATE

Certificate in Quantitative Finance, CQF

Aug 2025 - Present

The CQF Institute, Online

- A globally recognized, industry-focused qualification designed to develop advanced quantitative and financial engineering skills through practical, applied training. ([Link to website](#))
- Modules: Quantitative Finance, Risk & Return, Equities & Currencies, Data Science & Machine Learning, Fixed Income & Credit. ([Link to modules](#))

MITx MicroMasters: Statistics and Data Science

Starting Jan 2026

MITx verified on edX, Online

- Graduate-level online program from MIT IDSS, includes hands-on computational work and a proctored capstone exam. Industry-recognized credential with pathways to Master's programs. ([Link to website](#))
- Modules: Probability, Machine Learning, Fundamentals of Statistics, Data Analysis, and Capstone Exam.

ACTIVITIES

FlowMate | AI Personal Assistant with GreenPT

19 Nov 2025

WTC 40 Hour Hackathon - AI Builders, Amsterdam

- Swift Mac-OS App that enhanced Natural Intelligence with memory, attention, and critical thinking. Create Focus Session that keep track of the app and content that the user is working on. Provide summary and notification that help user to be focus by detecting distraction based on context.
- **Winner of 1st Price** for the theme Natural Intelligence Oriented Personal Assistant, with price of 500€.

PROFESSIONAL EXPERIENCE

AI Impact Ambassador

Nov 2025 - Present

AISO, Amsterdam

- Selected to join an university-wide program at the University of Amsterdam with AISO, alongside with Teaching & Learning Center helping to shape how AI is integrated across UvA

Software Engineer & Study Coordinator (Part-time)

Sep 2022 - Present

CMC Tasly Group B.V., Amsterdam

- Full stack developed Apprenticeship Reservation Website for student and clinic. With basic Next.js, Tailwind CSS, and deployed on Vercel.
- Manage student related tasks, courses contents, student enrolment, organize open/graduation day, and social media promotion.

TECH STACK

Programming Languages

Python, C, C++, SQL, Bash, MATLAB, Swift, Bash, n8n

Libraries & Tools

scikit-learn, SciPy, Numpy, Pandas, Matplotlib, JAX, Polars

Developer Tools

Git, Docker, Linux, VS Code, Figma, Cursor, Antigravity, Microsoft Office (Excel, PowerPoint), Google Colab

Database

SQLite, MySQL, PostgreSQL

AI Models

ChatGPT 5.1, Gemini 3, Codex