

Shane Tao

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EDUCATION

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| ESSEC & CentraleSupélec
<i>M2 in Data Science & Business Analytics</i> | Paris, France
2026 - 2027 |
| • Focus: Predictive Modeling, Large-scale Optimization, Financial Econometrics, Machine Learning. | |
| Université Paris-Saclay
<i>M1 in Applied Algebra (UVSQ)</i> | Versailles, France
2024 - 2025 |
| • Specialization: Applied Probability, Galois Theory, Cryptography, Computational Algebra. | |
| The Chinese University of Hong Kong, Shenzhen
<i>BSc in Mathematics (Graduated with Distinction)</i> | Shenzhen, China
2018 - 2022 |
| • Quant Foundations: Stochastic Processes, Numerical Analysis, Lie Algebras, Dynamical Systems. | |

APPLIED ENGINEERING & INNOVATION

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| Maïsk (MakeITAgri Saison 8)
<i>Project Lead & Quantitative Modeler</i> | Paris, France
2026 |
| • Quantitative Modeling: Engineered Maïsk , a corn-planting Decision Support Tool, applying quantitative finance models to forecast yield volatility under uncertainty. | |
| • Risk Management: Implemented risk-sharing algorithms to hedge farmers' exposure to environmental and market fluctuations. | |
| • Award: Won the <i>Prix Spécial du Jury</i> for innovating agricultural risk mitigation through mathematical engineering. | |
| ProofMate (Station F Fighters Program)
<i>Founder & Lead Developer</i> | Paris, France
2025 - Present |
| • AI Architecture: Built an AI-driven platform to extract and visualize mathematical proof structures via graph analysis. | |
| • Product Strategy: Led technical prototyping and product-market fit validation within the Paris-Saclay innovation ecosystem. | |

RESEARCH & QUANTITATIVE EXPERIENCE

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| MICS, CentraleSupélec
<i>Quantitative Research Assistant</i> | Paris-Saclay, France
Aug 2025 - Feb 2026 |
| • Stochastic Control: Developed optimal control frameworks for multi-dimensional Brownian systems using Hamilton-Jacobi-Bellman (HJB) equations. | |
| • Computational Finance: Built high-performance Monte-Carlo simulations and finite-difference solvers (Python) to bridge theoretical models with numerical applications. | |
| University of Cambridge & CUHK-SZ
<i>Research Assistant (Mathematics & Algorithms)</i> | UK & China
2019 - 2021 |
| • Algorithm Optimization: Implemented Secure Multi-party Computation (MPC) protocols and improved data transmission via algebraic network coding (C++/Python). | |
| • Pure Mathematics: Investigated field extensions, symmetry groups, and algebraic structures through advanced research seminars. | |

SKILLS & TRAINING

Quantitative & Finance: Stochastic Calculus, HJB Equations, Monte-Carlo Methods, Convex Optimization, Financial Modeling (HEC Paris).
Programming & Tools: Python (NumPy, SciPy, PyTorch), C++, SQL, Git.
Languages: English (C1), French (B2), Mandarin (Native).