

JENNIVINE (JIANWEN) CHEN

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PROFESSIONAL EXPERIENCE

GSAM Insurance Strategist - Analyst (July 2023 - Current)

Currently working as a quantitative strategist in Goldman Sachs Asset Management, my day-to-day experience involves converting complex financial application into abstract mathematical models and optimisation problems to solve, programming these financial models, and advise on client investment portfolios.

SKILLS

Programming Python, C++, C, Haskell, Scala

Data Science Machine learning, Numpy, Pandas, Scipy, Scikit-learn, Tensorflow, Keras, Pytorch

EDUCATION

University College London

September 2024 - Current

MSc Quantum Technologies

Examined modules to date: Advanced Quantum Theory, Quantum Computation and Communication, Advanced Photonic Devices, Research Software Engineering with Python; current modules: Techniques of High Performance Computing, Quantum Field Theory.

Thesis: Mathematical structure of contextuality, and its application to achieving quantum advantage.

Balliol College, Oxford

October 2020 - June 2023

BA Computer Science and Philosophy - Final Honour School

Compulsory Modules: Discrete Mathematics, Probability, Elements of Deductive Logic, Functional Programming, Imperative Programming, Introduction to Philosophy, Algorithms and Data Structure, Models of Computation.

Notable Optional Modules: Quantum Information, Linear Algebra and Continuous Maths, Intermediate Philosophy of Physics, Philosophical Logic, Machine Learning, Ethics of Artificial Intelligence and Digital Technology

Additional Modules, taken without credit: Introduction to Calculus, Fourier Series and PDE, Quantum Theory, by the maths department, and Special Relativity by the physics department.

Presbyterian Ladies' College (PLC), Sydney

January 2017 - August 2020

High School

I was awarded the Outstanding Cambridge Learner Award for gaining the highest mark in the world in the November 2018 Cambridge IGCSE Physical Science (0652) examinations. In my final year of high school, I was elected the STEM Captain, and took initiative to organise a lecture in quantum computing by Dr Ivan Kassal from the University of Sydney. During this time, I also independently self-studied three A-levels and achieved the grades of A* in Economics and Computer Science, A in Mathematics.

Achievements:

- Australian Linguistic Olympiad (OzClo), Gold certificate (2020)
- ProgComp (UNSW Programming Competition), Distinction - 11th/104 teams (2020)
- Australian Chemistry Olympiad, High Distinction (2019)
- RACI National Titration Competition, 6th in NSW (2019)
- IMMC (International Mathematical Modelling Competition) National Finalist (2019)
- BHP Billiton Foundation Science & Engineering Award National Finalist (2019)

- Participant by invitation to the AIOC School of Excellence (Australian Informatics Olympiad Competition, 2018)
 - STANSW Young Scientist Award 1st place in Chemistry Years 9-10 category (2018)
 - Australian Earth & Environmental Science Olympiad, Distinction (2018)
 - Australia Mathematics Competition (AMC), Distinction (2018)
 - Australia Intermediate Maths Olympiad, Distinction (2018)
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EXTRACURRICULAR ACTIVITY

Google Developer Student Club (2021-2023)

Having started in the Sponsorships, Partnerships and Careers (SPC) team at Google Developer Student Club (GDSC) Oxford, I worked to get greater access to people in the university; build bridges between GDSC Oxford and developer organisations locally and globally; and promote educational events for inclusion and diversity. In the 2022 - 23 academic-year, I took over as the Lead for Oxford's Google Developer Student Club. Under my leadership, GDSC Oxford hosted various successful events including Machine Learning lecture series, algorithmic trading workshop, ethical AI panel etc to increase inclusion and outreach of the tech developer community.

Cherwell Newspaper Science and Technology Editor (2022)

In this role as the editor of Cherwell's Science and Technology section, I sent out regular article commission pitches, conceptualised article ideas, and managed the pool of 50+ volunteer student writers for the fortnightly newspaper issues, both in print-edition and digitally on Cherwell's website.

OxAI Society AI Education Resource Curator (2021)

I built out content for the OxAI Educational Resources Hub, by reviewing, compiling, categorising, and labelling world-class AI educational resources from the web and to liaise with subject matter experts at the University to identify and fill important content gaps.

CSIRO's Data61 Blockchain and Smart Contracts Work Experience (2019)

I worked under the Blockchain and Legal Informatics team at Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO)'s Data61 and undertook study on the use of DAML smart contract language and SDK to design and model smart contract for multi-party business processes.

University of Sydney Chemical Engineering Work Experience (2018)

I pursued studies in varying scientific fields from PhD students and assisted them in their day-to-day research.

HONOURS & AWARDS

Qiskit Global Summer School 2022, Quantum Excellence – IBM Qiskit

The Qiskit Global Summer School in 2022 had a strong focus on applications to quantum simulation, specifically in quantum chemistry. Through this two-week intensive summer program, I learnt about the Jordan-Wigner mapping to convert Hamiltonian into an expression of Pauli operators that quantum computers can understand, and the Variational Quantum Eigensolver for finding the ground state energy for each Hamiltonians.

COMAP Mathematical Contest in Modeling (MCM/ICM), Honourable Mention (2022)

Using a method of agent-based modelling to simulate gameplay by players of various abilities and vocabulary sizes, and Hidden Markov Model to capture the evolution of the underlying player population to explain the variation of WORDLE results reported on twitter each day, predict the distribution of reported results for a given future solution word, and classify solution words by difficulty.

Apex:E3 OxBridge Varsity Algorithmic Trading Competition, 2nd place (2020)

Created a cryptocurrency trading algorithm linked to the Coinbase API and placed second among 15 teams from Oxford and Cambridge.