STEVEN-SHINE CHEN

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EDUCATION

MEng Massachusetts Institute of Technology (MIT), Computer Science Exchange Student 2024-2025

- **Ranked 1st** in 6.106 Software Performance Engineering
- **GPA: 5.0/5.0** — Deep Learning (98%), Reinforcement Learning (97%), Software Performance Engineering (93%), Distributed Systems (99%), Nonlinear Optimization (86%), Stats Computation and Applications (91%)

MEng Computing, Imperial College London 2021-2024

- **Ranked 1st in cohort** for Best Overall Exam Performance
- 1st Year: **91% Average**, 2nd Year: **87% Average**, 3rd Year: **84% Average**

EXPERIENCE

MIT Media Lab, Multisensory Intelligence Group, Researcher Aug 2024 - Present

- Fine-tuning LLMs via reinforcement learning to perform multimodal reasoning

Marshall Wace, Software Engineer Placement April 2024 - Aug 2024

- Developed an LLM evaluation system using **MLFlow** to benchmark LLM citations for RAG systems
- Created a hybrid keyword-vector-fuzzy search, surpassing original LLM citation performance with a smaller model
- Developed an automated prompt engineer which improves and generates prompts tailored to your task

Maven Securities, Software Engineer Intern June 2023 - Aug 2023

- Created an ingestion pipeline for XML data and optimized SQL queries with indices

Imperial College, Personal Maths Tutor & Undergraduate Teaching Assistant Oct 2022 - Mar 2024

- Taught small group discrete maths, logic and algorithms tutorial sessions for first-year university students

Imperial College, Undergraduate Researcher Jul 2022 - Oct 2022

- Developed a neural ODE-based trajectory parameterization for RGBD SLAM using **PyTorch**
- Implemented the RGB loss and neural ODE, adapted to work with a convolutional neural network

DoubleJGames, Lead Game Designer Dec 2014 - Jul 2021

- Designed 'Game Dev Life' (Sold 300k+ copies, nominated for the Innovation Award) and 'Dropblox' (12m+ plays)

PUBLICATIONS

- **Interactive Sketchpad**: An Interactive Multimodal System for Collaborative, Visual Problem-Solving. An LLM system that creates diagrams via code generation and solves problems with visual chain of thought. **(CHI 2025)**

PROJECTS

Monte Carlo Tree Search for LLMs in Education Nov 2024 - Dec 2024

- Developed an Monte Carlo Tree Search (MCTS) LLM-based tutoring framework that optimizes teaching strategies
- Uses a teacher LLM with rollouts simulated using proportion of correct responses from a student LLM

Self-Driving Robot Car Jan 2024 - Mar 2024

- Created a self-driving robot which used Monte Carlo Localisation and a sonar sensor to navigate a room
- 1st in Imperial Robotics Racing Competition using a camera sensor and Dynamic Window Approach

ACHIEVEMENTS

- 2nd in $30,000 OBSS CodeMaster Programming Contest Mar 2024
- Represented Imperial twice at the ICPC Northwestern European Regional Contest (NWERC) Nov 2022, Nov 2023
- 13th at the ICPC UK and Ireland Programming Contest 2023 (UKIEPC) Oct 2023
- IC Hack 23 Multi-Award Winning location-based geo-tag game (Europe's largest student hackathon) Feb 2023

Languages Python, C++, C#, C, Java, Rust, Kotlin, Javascript, Haskell