

Boan Huang

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EDUCATION

University College London(UCL)

BSc Computer Science

London, UK

06/2028

- Predicted Degree: First Class.
- Relevant Module: Object-Oriented Programming, Software Engineering, System Engineering

EXPERIENCE

High School Mathematical Contest in Modeling (HiMCM) | *Team project, python, matlab* Oct/2023 - Nov/2023

- Led a four-member team through a three-week modeling challenge, responsible for algorithm design and programming.
- Built and evaluated mathematical models, implemented simulations, and contributed to the technical writing of the final paper.
- Gained experience in teamwork, academic writing, and problem-solving in a research-style environment.
- Co-authored the final research paper and enhanced experience in academic writing, data interpretation, and research collaboration.

PROJECTS

Hackathon: Quantum Battleships in UCL Qiskit Fall Fest 2025 | *Python, Jupyter Notebook*

- Developed a quantum-enhanced Battleships game in Jupyter Notebook using EV bomb-testing and Quantum Zeno-style scanning to detect ships with minimal measurement
- Implemented a one-qubit QuantumEngine with Qiskit to run mid-circuit measurement probes, classify outcomes, and compute confidence via Wilson intervals
- Designed a Bayesian AI strategy that updates beliefs in-place, selects optimal targets, and adapts actions based on scan results to maximize expected score
- Integrated a full UI with interactive boards, action controls, scoring logs, and real-time feedback to deliver an engaging player-vs-AI gameplay experience

Research Project – AI Technology in Audio Synthesis | *machine learning, neural networks, application prospects*

- Conducted a research-driven project exploring how AI models (e.g., deep learning-based synthesis techniques) can generate and enhance audio content.
- Wrote and published a first-author research paper titled “*The Application and Prospect of AI Technology in Audio Synthesis*” in IJET (Paper ID: ZLYX-038).
- Gained experience with AI applications in multimedia, model evaluation, technical literature review, and academic presentation of research findings.

AWARDS

- Gold Prize in USA Computing Olympiad (USACO)

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, HTML/CSS, R,

Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI

Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

Libraries: pandas, NumPy, Matplotlib

Working Languages: English(fluent), Chinese(native)