Jennifer Cheung

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Education

Northeastern University, BS in Computer Science Sep 2021 - May 2025

- GPA: 3.4/4.0
- **Coursework:** Object Oriented Design, Data Structure and Algorithms, Bioinformatics (graduate level)
- **Awards:** Dean's Presidential Merit Scholarship, Dean's List

Experience

Research Assistant, Queens University – Belfast, Ireland Jan 2024 - Present

- Design and execute a Bayesian sequential experiment to study algorithm aversion and human-AI advice systems.
- Built random forest model and an experimental platform in Python/Alfred3 to randomize participants across 4 conditions (human, algorithm, supervised algorithm, hybrid advice).
- Bayesian t-tests measured advice taking behavior, achieving a true positive rate 95% to detect effects (d = 0.5).
- Analyze data in R (BayesFactor package), controlling for confidence shifts and demographic covariates.

SGA Backend Engineer, Project Lead, Northeastern University – Boston, MA Jan 2024 - May 2024

- Optimized PostgreSQL queries and RESTful APIs, improving scalability and server response times by **40%**.
- Onboarded new members, assigned tickets, held weekly sprints, and demoed the final results to senators.

Laboratory Technician, Northeastern University – Boston, MA Sep 2022 - Aug 2023

- Maintained biology, molecular biology, and human anatomy teaching laboratories and equipments.
- Assisted staff and teaching assistants with technical questions and stock solution inquiries.

Projects

Personal Website | JavaScript, HTML/CSS, React.js, Next.js, Node.js Present

- My little corner of the Internet, where creativity meets craftsmanship–you will find my projects and hobbies!

NLP-Based Text Classification Pipeline | Keras, TensorFlow, BERT, Neural Network 2025

- Developed a two-stage NLP system to classify text messages as spam (96.2% accuracy) or topics (93.8% accuracy). Proposed mobile app integration for real-world elderly assistance.
- Achieved 93.5% end-to-end pipeline accuracy by integrating a neural network (spam) + BERT (topics).

2048 Self-Solving AI | Python, Expectimax, Matplotlib 2024

- Developed AI agent using expectimax search with heuristic optimization (merging priority, empty space weighting) to autonomously solve 2048, reducing runtime by 40% via state pruning and loop consolidation.
- Engineered movement algorithms with unit testing, resolving edge cases in tile merging and successor state generation to ensure 100% accuracy in deterministic transitions.

Battle Salvo | Java, JSON, JUnit5, Jacoco, Git, Agile 2023

- Built command-line version of Battleship, featuring flexible board sizes, dynamic fleet composition, and simultaneous turn-based game play. Implemented multiplayer via sockets with a ProxyController.

Technologies

Languages: Python, Java, JavaScript, R, SQL, HTML/CSS

Frameworks/Tools: TensorFlow, Keras, Hugging Face, React.js, Next.js, Node.js, Scikit-learn, PostgreSQL, Git

Concepts: RESTful APIs, MVC, SDLC, Agile, Data Structures & Algorithms, NLP, Data Analysis