Jason Yap

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EDUCATION

University of Illinois Urbana-Champaign *GPA: 4.00/4.00*
B.S. in Computer Science *May 2028*

Relevant Coursework:

- Data Structures, Linear Algebra, Computer Architecture, Intro to CS (C++), Discrete Structures

Certifications: Deep Learning & Machine Learning Specializations (Stanford); CS50X (Harvard)

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, TypeScript, HTML, CSS, SQL
Technologies: Flask, Express, React, Node.js, TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib, MongoDB, SQLite, Firebase, AWS, Heroku, Docker, Kubernetes, Git/GitHub, Unix/Linux

PROJECTS

Quiz Bowl GenAI Reader - *Discord App*

- Built Python/Discord App that reads past Quiz Bowl questions aloud using Google Cloud TTS API, automating routine tasks and enabling users to answer in real-time voice channels.
- Deployed on Heroku with **300K questions read** with unit testing and Git version control.

Chord Guessing Game - *Full Stack Web App*

- Created music theory game with React, Firebase auth, and responsive UI using Tailwind.
- Made RESTful APIs with Node/Express for user and chord CRUD in MongoDB database.
- Hosted using AWS Lambda + Amplify with Serverless for scalable, data-driven performance.

Cryptocurrency Trading Simulator- *Full Stack Web App*

- Developed Flask/Python trading simulator with real-time crypto prices via networking API.
- Implemented trading engine with SQLite CRUD operations for cloud-based player data.
- Improved usability by fixing bugs and adding front/back-end features for system reliability.

Calories Burned Estimator- *ML Web App*

- Constructed ML models (XGBoost, Neural Networks, Random Forest) in Python with scikit-learn and PyTorch, achieving **99.0%** accuracy in calorie burn prediction.
- Applied feature engineering and dimensionality reduction (PCA) using Pandas and NumPy, visualized data with Matplotlib and Seaborn.
- Operated Flask backend on AWS EC2 in Unix/Linux environment with TCP/IP networking.

EXPERIENCE & ACCOMPLISHMENTS

International M3 MathWorks Math Modeling Challenge **Naperville, IL**
Honorable Mention **(Top 3% of 650 teams)** *March 2024*

- Collaborated in a diverse team to build predictive ML models with Python, Pandas, and SKLearn.
- Modeled data visualizations from group data with Matplotlib and co-authored a technical paper.
- Recognized with Honorable Mention **(22/650 worldwide)** for analytical and critical thinking skills.

Financial Engineering Club **Champaign, IL**
Quantitative Researcher **(Best Poster + Best Project Awards)** *Aug,2025-present*

- Built ML models for IV prediction ($R^2 = 0.814$) with 3175× faster inference than Black-Scholes.
- Refined research through cross-functional collaboration and iterative feedback with team members.
- Presented research to Financial Engineering experts and directors, demonstrating communication.