# Kelly Truong

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## EDUCATION

## Columbia University — B.S. Computer Science

New York, NY

Fu Foundation School of Engineering and Applied Science

- Expected May 2027
- Honors & Scholarships: QuestBridge National Match Scholar · Gates Scholar · Dell Scholar
- Relevant Coursework: Fundamentals of Computer Systems, Data Structures, Discrete Math, Advanced Programming, Multivariable Calculus, Intro to Java, Intro to Computing in Python

### EXPERIENCE

## Quantum Computing Intern

May 2024 – August 2024

British Petroleum (bp)

Houston, TX

- $\bullet$  Optimized Mixed Integer Programming (MIP) problems by benchmarking quantum, hybrid, and classical solvers, mitigated constraint violations in 95% of test cases
- $\bullet$  Improved integrate novel QUBO transformation algorithms, improving solver throughput by 80%
- Presented findings to a team of 40+, emphasizing investment rationale and business value, and earned trust by clearly articulating performance metrics

## Projects

#### Fake Image Detector LLM | Python, React, PyTorch, AWS S3 and CLI

March 2025 – Present

- Developed a custom CNN using PyTorch, achieving 87% accuracy in distinguishing AI-generated vs. real faces on a dataset of 1,000+ images.
- Deployed the model as a full-stack Flask web app, leveraging AWS S3 and AWS CLI for hosting static assets and automating deployments.
- Implemented real-time predictions and confidence scores for uploaded images, utilizing saliency maps for explainability and user trust.

#### Markowitz Portfolio Optimizer | React, Python, Flask, Chart.js, Git

February 2025 – Present

- Engineered a full-stack Python Flask application leveraging the Markowitz model to help users visualize the efficient frontier on an optimized diverse portfolio based on various risk levels.
- Calculated Sharpe ratio and portfolio variance using NumPy, providing robust analytics and real-time performance evaluations with Chart.js visualizations.

#### Personal Website | React. is, HTML, SCSS, Git, Netlify

December 2024 – Present

- Designed and deployed a React.js-based website using Netlify to showcase personal software projects, technical skills, and professional experience.
- Customized styling with SCSS to create an intuitive and professional user experience with animations across components.

#### TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, SQL (Postgres), Swift, Assembly, HTML/CSS/SCSS

Frameworks: React, Flask

Cloud/DevOps: Git, AWS S3, AWS CLI, Netlify, Github Actions Misc. Visual Studio Code, XCode, pandas, NumPy, Matplotlib

## LEADERSHIP & INVOLVEMENT

Columbia Gaming – Treasurer Columbia Vietnamese Students Association – VP Rewriting the Code – Member Girls Who Code – Member

April 2025 - Present

April 2024 - Present

Jan 2023 - Present

Jan 2022 - Present