

# Mercy Doan

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## Education

### Queen's University, Bachelor of Computing (Honors)

Sep. 2020 – Apr. 2024

*Specialization in Computing/Mathematics, focus in Data Analytics/Statistics (2x Dean's Honor List)*

Kingston, ON

**Areas of Study:** Data Analysis, AI/ML/Information Theory, Software Security, Data Structures, Algorithms

## Technical Skills

**Languages:** Java, Python, MATLAB, R, HTML/CSS, Bash, C, JavaScript, Haskell

**Frameworks/Technologies:** React, Node.js, Bootstrap, WordPress, Git/GitHub, Figma

**Libraries:** Pandas, NumPy, HuggingFace, SciKitLearn, TensorFlow, Keras, PyTorch

## Experience

### NLP Project Manager

May 2022 – Present

QMIND (Queen's University AI/ML Design Team)

Kingston, ON

- Led a team of 4 to build a Transformers model that analyzes code to detect security vulnerabilities using HuggingFace libraries
- Educated students on a variety of NLP techniques (Supervised/Unsupervised Regression/Classification, statistical models, Ensemble methods, Deep Learning, LSTMs, Transformers), drawing from current research methods

### Vice-President of Operations

May 2021 – Present

COMPSA (Queen's Computing Students' Association)

Kingston, ON

- Led a team of 50+ students in portfolios of Academics, Equity, Events, Marketing, and Professional Development
- As UI/UX Team Lead, communicated with stakeholders, designers, and developers to build a new full-stack application for 1200+ students using AWS, React, Next.js, and Figma

### Cybersecurity Researcher

May 2022 – Sep. 2022

Google ExploreCSR

Kingston, ON

- Analyzed and applied research papers on autonomous vehicle security, software development life cycles, vulnerability detection, and machine learning techniques used in cybersecurity
- Proposed new ways to improve an autonomous vehicle software security and development method by using machine learning techniques for prioritizing vulnerability metrics

### Co-President

Mar. 2022 – Present

QLANG (Queen's Languages and Linguistics Club)

Kingston, ON

- Founded the first Languages and Linguistics Club at Queen's University
- Led a team of 4 directors to organize events and promote a like-minded community
- Held weekly workshops with professors and clubs to educate 60+ members on relevant topics

### Computing and Math Teaching Assistant

Sep. 2021 – Present

Queen's School of Computing, Queen's Mathematics and Statistics Department

Kingston, ON

- Provided office hours and feedback on Python and Java assignments for 50+ undergraduate students on a weekly basis, and debugged code with concepts up to recursion, tkinter, machine learning principles, OOP, etc.
- Discussed interesting math puzzles weekly with first year students to foster an engaging and creative environment

## Projects

### Data Analytics Projects | MATLAB

Jan. 2022 – Apr. 2022

- Reported on 7 data analytics projects, such as predicting commodity costs and clustering fruit cultivars
- Implemented data analysis methods such as PCA, LDA, dimensionality reduction, and artificial neural networks
- Used tests to check efficiency of analyses, such as AUC/ROC curves and confusion matrices

### Beacon | Figma, Bootstrap, Javascript, Google Maps API

Nov. 2020

- Built a website in a team of 4 that helps users find local mental health support and resources
- Created the frontend to display mental health services based on a mental assessment and the user's location