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 (3x Dean's Honor List) *Kingston, ON*
Areas of Study: Data Analysis, AI/ML/Information Theory, Software Security, Databases, Data Structures, Algorithms

Technical Skills

Languages: Python, Java, Javascript, CSS, HTML, MATLAB, R, Bash, C, SQL, PHP
Frameworks/Technologies: React, Node.js, Bootstrap, WordPress, Git/GitHub, Figma, Jira, Supabase
Libraries: Pandas, NumPy, HuggingFace, SciKitLearn, TensorFlow, Keras, PyTorch

Experience

NLP Director of Design May 2022 – Present
QMIND (Queen's University Artificial Intelligence Design Team) *Kingston, ON*
- Guided 5 project managers to build NLP projects through leadership and reflection workshops
- Educated students on using GitHub, HuggingFace libraries, and a variety of NLP techniques (Statistical models, Ensemble methods, Deep Learning, LSTMs, Transformers, supervised/unsupervised regression/classification, s)

Vice-President of Operations May 2021 – May 2023
COMPSA (Queen's Computing Students' Association) *Kingston, ON*
- Led a team of 50+ students to support and enhance the undergraduate Computing student body's experience in Academics, Equity, Events, Marketing, Professional Development, Year Representation, and Tech Support
- Created new initiatives to boost student engagement, develop an internal foundation of long term goals/plans, and advocate for student issues (understaffing, academic assistance, equitable policies, etc.)

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 and curated educational material
- Led 4 directors to organize weekly workshops for 60+ members, covering 35+ major European/Asian languages

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 regression and deep learning to prioritize vulnerability metrics

Computing and Math Teaching Assistant Sep. 2021 – May 2023
Queen's School of Computing, Queen's Mathematics and Statistics Department *Kingston, ON*
- Provided office hours and feedback on math, Python, Java assignments for 50+ undergraduate students on a weekly basis, and debugged code with concepts such as recursion, machine learning basics, regex, OOP, etc.

Projects

Security Vulnerability Detection with Transformers | *Python (HuggingFace, SciKitLearn)* Sep. 2022 - Mar. 2023
- Led a team of 4 to build a NLP model that detects security vulnerabilities in code using HuggingFace libraries
- Trained and finetuned Transformer, neural network, and probabilistic models which were presented at the Canadian Undergraduate Conference on AI (CUCAI)

COMPSA (Computing Students' Association) Website | *React*, *Node.js*May 2022 - May 2023
- As UI/UX team lead, communicated with stakeholders, designers, and developers to build a new full-stack application for 1200+ students on university servers, organized on Jira, GitHub, and Figma

Data Analytics Projects | *MATLAB, Python (Keras, TensorFlow)*Jan. 2022 - May 2023
- Reported on 10 data analytics projects using methods such as PCA, SVMs, dimensionality reduction, constrained/unconstrained optimization, and artificial neural networks
- Built computer vision models for number and clothing item classification, achieving up to 97% accuracy