

## EXPERIENCE

**Concordia University – Undergraduate Research Assistant** Montreal, QC  
*Concordia Data System Lab (CoDS) - under the supervision of Dr. Essam Mansour* June. 2021 – Present

- Integrate SHAP to a variety of Machine Learning models to explain how different inputs affect the end results.
- Utilize Python with XGBoost to train different classifiers using gradient boosting technique.

**HackConcordia – Director of Technology / Software Developer** Montreal, QC  
*Technology Division* June. 2021 – Present

- Plan and prepare the technical infrastructure for ConUHacks 2022 - Montreal's biggest annual hackathon.

**DRW Trading – Software Developer Intern** Montreal, QC  
*Event-driven Trading Division in a High-frequency Trading Firm* May. 2021 – Present

- Develop and apply a diff mechanism to compare web snapshots and extract meaningful insights for traders, using OpenCV and Scikit-image package.
- Implement an efficient mechanism to crawl, take screenshots of 700+ urls daily, then store in a remote Ubuntu server, using Python with Selenium and Docker.

**Ericsson – Open-source Software Developer Intern** Montreal, QC  
*Eclipse-Theia Team (theia-ide.org): Open-source Cloud & Desktop IDE framework* Sept. 2020 – April. 2021

- Authored and developed @theia/external-terminal (1000+ weekly downloads) – a Theia package that contributes the ability to interact with native terminals, using TypeScript, Node.js, React.js and Electron.
- Reduced average test wait time by nearly 90% in theia-ide/theia-apps (a set of 15 Docker images) by integrating the CI-CD workflow to GitHub Actions.
- Authored and maintained Selene IDE – a cross-platform IDE based on Theia for illustration purpose.
- Assisted project maintainers to close/merge pull requests by carefully reviewing and testing code from the open-source community.

## PROJECTS

**Personal Website:** ducnguyen.dev (for additional information and projects)

**CleverICE - 1st Place of Intact Challenge in ToHacks 2021 (out of 41 submissions) (DukeNgn/CleverICE)**

Efficiently built back-end service, integrated GPT-3 Open-AI, and created customer database on CockroachDB for CleverICE - a web app that helps insurance companies to speed up the insurance claim process from customers.

Utilized: Python, Flask, Open-AI, Cockroach SQL, CockroachDB

**COVID-19 Detector - HackThe6ix 2020 (DukeNgn/covid19-detector)**

Led a team to build a web app that determines the probability of a person contracting with COVID-19 based on Chest CT Scan images. A Machine Learning model was trained on Azure platform with Python and Flask to perform the tasks.

Utilized: Python, Flask, HTML/CSS, JavaScript, Bootstrap, Azure Custom Vision, Azure Deployment

## EDUCATION

**Concordia University** Montreal, QC  
*Bachelor of Computer Science, Software Systems CO-OP* Sept. 2017 – Present

**McGill University - Desautels Faculty of Management**  
*Personal Finance Essentials (Certificate)* Jul. 2020

## VOLUNTEER & SOCIETY

**Concordia Institute for Co-operative Education:** CO-OP Mentor  
**Unmanned Aerial Vehicles (UAV) Concordia:** Software Team Member  
**Concordia Access Centre for Students with Disabilities:** Note Taker  
**Golden Key Honor Society - Concordia Charter:** Honor Member  
**HackThe6ix - 2018:** Hackathon Staff Member

## SKILLS

**Programming:** TypeScript, JavaScript, Java, Python, R, C++

**Tools:** Git, Docker, Node.js, Electron, React.js, Flask, MySQL, Jekyll

**Platforms:** GitHub, GitLab, TravisCI, GitHub Actions, Microsoft Azure, Google Cloud, Heroku

**Others:** Vim/NeoVim, Emacs, LaTeX, Markdown

**Languages:** French (Intermediate), English, Vietnamese