

Duc Nguyen

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EDUCATION

Concordia University

Bachelor of Computer Science, CO-OP

Sept. 2017 – Present

Montreal, QC

WORK EXPERIENCE

Morgan Stanley – Software Engineering Intern

Application Development Team in an Investment Bank

Jan. 2022 – Apr. 2022

Montreal, QC

DRW Trading Group – Software Engineering Intern

Event-driven Trading Team in a High-frequency Trading Firm

May 2021 – Aug. 2021

Montreal, QC

- Developed a Computer Vision solution to compare web snapshots and extract meaningful differences, using OpenCV, Scikit-image, and Tesseract OCR.
- Created an efficient pipeline to crawl, poll, and take screenshots of 900+ URLs daily, then store in a remote Ubuntu VM, using Python with Selenium and Docker.
- Built a REST API service to report HTTP failures and abnormal responses from URLs, using Python with FastAPI.
- Implemented a concurrent system and a Flask API service for queueing and processing jobs triggered by users.

Utilized: Python, Pytest, FastAPI, Flask, Django, OpenCV, Scikit-image, Tesseract, Selenium, Docker, REST API

Ericsson – Open-source Software Engineering Intern

Eclipse Theia Team (theia-ide.org)

Sept. 2020 – Apr. 2021

Montreal, QC

- Contributed to [Eclipse Theia](https://theia-ide.org) (15.6k+ stars on GitHub) - an Open-source Cloud & Desktop IDE framework.
- Authored and developed [@theia/external-terminal](https://github.com/theia-io/external-terminal) (2000+ weekly downloads) - a Theia package that contributes the ability to interact with native terminals (on Windows, OSX, and Linux), using TypeScript, Node.js, and Electron.
- Reduced average test wait time by nearly 90% in [theia-ide/theia-apps](https://github.com/theia-io/theia-apps) (a set of 15 Docker images) by writing shell scripts and integrating the CI-CD workflow to GitHub Actions.

Utilized: TypeScript, JavaScript, Node.js, React.js, Electron, Docker, GitHub Actions, TravisCI

VOLUNTEER

HackConcordia – Vice President of Technology / Software Engineer

Technology Team

May 2021 – Present

Montreal, QC

- Plan and prepare the technical infrastructure for ConUHacks 2022 - Montreal's biggest annual hackathon.
- Deployed hackconcordia.io website (node.js and express.js web app) using Docker and Nginx on Digital Ocean.

Utilized: JavaScript, Node.js, Express.js, Docker, Nginx, Digital Ocean

Concordia University – Undergraduate Research Assistant

Concordia Data System Lab (CoDS) - under the supervision of Dr. Essam Mansour

May 2021 – Aug. 2021

Montreal, QC

- Integrated [SHAP](https://shap.readthedocs.io) to a variety of Machine Learning models to explain how different inputs affect the end results.
- Utilized Python with XGBoost to train different classifiers using gradient boosting technique.
- Built an interface to demo the Knowledge Graph system using React.js and FastAPI.

Utilized: Python, Jupyter Notebook, SHAP, FastAPI, JavaScript, FastAPI

Concordia Institute for Co-operative Education: CO-OP Mentor

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 speeds up the insurance claim process for customers.

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

SKILLS

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

Tools and Frameworks: Git, Docker, Electron, React.js, Node.js, Flask, FastAPI, MySQL

Platforms: GitHub, GitLab, TravisCI, GitHub Actions, Microsoft Azure, Google Cloud, Heroku, CockroachDB, Digital Ocean

Others: Vim/NeoVim, Emacs, LaTeX, Markdown