# OLIVER STAPPAS

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## EDUCATION

**McGill University** | BA Software Engineering / Minor Applied Artificial Intelligence | Aug 2019 – May 2024

- GPA: 3.81 / 4.00

**Marianopolis College** | D.E.C., Pure and Applied Science | 2019

## EXPERIENCE

**Intact Financial Corporation** | Montreal, QC
AI Back-End Developer Intern | Sep – Dec 2022

- Worked in an **Agile** environment following **Scrum** framework, using **JIRA** and **Github** to document requirements and goals.
- Helped develop **Pod** deletion functionality on **Airflow** using **Python** and **Kubernetes API**, with accompanying **Pytest** unit tests.
- Tested integration of basic **Airflow** functionality on **Amazon SageMaker**.
- Introduced **semantic releasing** to **GitLab** CI/CD pipelines, allowing for fully automated version management and package publishing.
- Added ability for users to set size of ephemeral storage for **JupyterHub** sessions using **Javascript** and **HTML.**

**Ericsson Canada** | Montreal, QC
Integration Engineer Intern | May – Aug 2022

- Designed a Grafana dashboard to display CPU and memory usage for **Kubernetes Pods** and **containers** used on the **OpenShift** platform for the Session Management Function (SMF) part of **5G** Service-Based Architecture.
- Developed **Python** script to process incoming Pod CPU and memory usage data and generated CSV files containing data filtered for specific **containers**.
- Developed **Bash** script to perform extensive checks on the health of the applications and platform within **OpenShift**.
- Made improvements to **Vue.js** frontend, **Node.js** backend and **Dockerfiles** for AI team's Data Catalog application.

**CareSimple** | Montreal, QC
Software Developer Intern | May – Aug 2021

- Worked in an **Agile** environment following **Scrum** framework, using **JIRA** and **Bitbucket** to document requirements and goals.
- Helped design **API** for gathering patient onboarding and compliance data using **PHP**.
- Designed "Reports" page on clinician website, using **React** and **Chart.js** library, getting data from aforementioned APIs.
- Proposed new indexes for **MySQL** database tables that performed many full scans

## PROJECTS

**Operating System** | Jan – April 2022

- Created an interactive **shell interface** with **batch mode** using **C**.
- Implemented a **scheduling infrastructure** with the ability to create **concurrent processes** using exec, with First Come First Serve (FCFS), Shortest Job First (SJF) and Round-robin (RR) **scheduling policies**.
- Designed and implemented **demand paging** with Least Recently Used (LRU) **page replacement policy**.

**Digit & Letter Classification Competition Using CNNs** | Nov 2021

- **Finished first** in classwide **Kaggle** competition with an accuracy score of **97.8%**.
- Implemented **majority voting** with predesigned and custom designed **convolutional neural networks** using **PyTorch**.
- Utilized additional **unlabeled** data and **augmented** all training data to improve **generalization**.

**Hockey Statistics** | July 2021 – (in progress)

- Helped design website presenting and manipulating data from the **NHL's official API** and public analytical data.
- Designed **Python** backend, focused on getting data from NHL's API using **Flask** and creating **DataFrames** from analytics input data files and custom made **MongoDB** database.
- Helped design **React** frontend application using **TypeScript**, **Chakra** UI component library and **Next.js**.
- Periodically updated **MongoDB** database with analytical data using weekly scheduled **Azure function.**
- Tested **React** component functionality using **Jest**.

**SmartGallery** | Sept – Dec 2020

- Created an art gallery **Vue.js** web app on **Heroku** with an accompanying **Android** app where artists can upload artworks and customers can browse and purchase them.
- Designed the end-to-end service using requirements, **UML** diagrams and generated POJOs.
- Created a backend **Java Spring Boot RESTful** service with a **Hibernate PostgreSQL** database.
- Configured a continuous integration **Gradle** build and **JUnit** test system using **Travis CI**.

**Kingdomino Application** | Jan – Apr 2020

- Developed a **Java Swing** application simulating the strategy board game Kingdomino.
- Used **Umple** to generate base classes from a class diagram and a finite-state machine.
- Tested functionality through **JUnit** tests based on **Cucumber** feature files.

**8-Puzzle Solver Using A* Algorithm** | Feb 2019

- Created a sliding puzzle solver using **Python**, using an **A* algorithm** implemented through a **min priority queue** storing board states and Manhattan / Hamming distance estimates.

## TECHNICAL SKILLS

**Programming Languages**
Python, Java, Bash, Javascript, PHP, C, SQL, OCaml, VHDL, Assembly

**IDEs & Editors**
Android Studio, Eclipse, IDLE, IntelliJ IDEA, Visual Studio Code, MySQLWorkbench, PhpStorm, PyCharm, Sublime Text

**Tools & Services**
Bitbucket, Docker, Git, Github, Gitlab, Grafana, Jira, Kubernetes, Linux, Microsoft Office, Microsoft Azure, MySQL, Node.js, Postman, Vim

**Operating Systems**
macOS, Ubuntu, Windows

## RELEVANT COURSES

**McGill University**
Algorithm Design, Algorithms and Data Structures, Applied Machine Learning, Computer Organization, Design Principles and Methods, Digital Logic, Model-Based Programming, Operating Systems, Programming Languages and Paradigms, Reinforcement Learning, Signals and Networks, Software Engineering Practice

**Stanford University (Coursera)**
Machine Learning

## AWARDS

**Engineering Excellence Bursary** | Apr 2021

Ministère de l'Enseignement supérieur

## LANGUAGES

**Fluent** | English, French
**Intermediate** | Greek