# Johanan Idicula

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Agile Developer That Leaves No Team Member Behind

## EMPLOYMENT

### SOFTWARE DEVELOPER Digital HR, Department of National Defence, Government of Canada
**Oct 2020–Present | Remote**

- Developing an applicant tracking system in Django used by over 1000 applicants and 300 managers (civilian-careers-defence.canada.ca).
- Leading team's move towards a pure CI/CD workflow with automated build, test, and code quality checks as well as autodeploy and autorelease workflows using GitHub Actions.
- Coaching a team of 9 developers and 2 UI/UX designers by filling a Scrum Master-like role: coordinating team's self-organization, helping team members resolve roadblocks, and encouraging team's openness and continuous improvement.
- Git Guru for team, sharing knowledge about best practices for rebasing, cherrypicking, history editing, and merge conflict resolution.

### SOFTWARE DEVELOPMENT CONSULTANT NeuroPoly, Université de Montréal
**Aug 2020–Present | Montréal, QC**

- Led architectural and project management decisions for development on shimming-toolbox, a Python tool for quantitative MRI data acquisition (github.com/shimming-toolbox/shimming-toolbox).
- Migrated CI workflows from Travis CI to GitHub Actions for automated build and unit testing.
- Currently providing code reviews and insight on technical decisions on a casual basis.

### JUNIOR SOFTWARE DEVELOPER Precision Analytics
**Sep 2019–Dec 2019 | Montréal, QC**

- Developed customized data onboarding, analysis, and visualization Shiny dashboards using R Tidyverse libraries for clients in the pharmaceutical and biotechnology sectors.

## RESEARCH

### UNDERGRADUATE RESEARCH ASSISTANT Biological and Active Materials Lab, McGill University
**Oct 2015–Sep 2019 | Montréal, QC**

Worked with Professor Allen Ehrlicher on cell mechanics projects:

**Probing the Mechanosensitivity of $\alpha$-actinin-4 | github.com/jidicula/fluoratio** | Python

- Analyzes and visualizes microscopy images using the datetime, numpy, scikit-image, and seaborn libraries.
- Achieved a $\frac{1}{N}$ runtime reduction using the Python3 multiprocessing library to parallelize the workflow using $N$ idle processor cores.

**Magnetic Microrheology | github.com/jidicula/magtrack** | Python

- Worked with a Master's student to develop a novel technique for measuring the material properties of cells.
- Tracks objects in microscopy videos and loads their positions into DataFrames for analysis and visualization.
- Integrated the Trackpy, pandas, numpy, scikit-image, and seaborn libraries into workflow.

**Cell Monolayer Deformation Microscopy | Publication under review** | MATLAB

- Quantifies and visualizes cell monolayer deformation from microscopy images.
- Cell Monolayer Deformation Microscopy reveals mechanical fragility of cell monolayers in the epithelial to mesenchymal transition, 2020.
  Amy A. Sutton, Clayton W. Molter, Ali Amini, Johanan Idicula, Maxwell Furman, Pouria Tirgar, Yuanyuan Tao, Ajinkya Ghagre, Newsha Koushki, Adele Khavari, Allen J. Ehrlicher.

# HOBBY PROJECTS

### **GAMCO-NAV-CHECK** Stock Value CLI Tool | Go, GitHub Actions

**Mar 2021–Present | github.com/jidicula/gamco-nav-check**

- Wrote a Go package (github.com/jidicula/go-gamco) for wrapping GAMCO's API for their closed-end funds (gabelli.com/funds/closed_ends).
- Wrote a CLI tool using the above Go module to fetch latest net asset value of each GAMCO closed-end fund, compare it with the stock's latest price on Yahoo Finance, and output a list of funds with a NAV/Price difference of $\geq$10%.
- Created CI/CD automations for both repositories using GitHub Actions for running lint, unit, and build tests as well as autorelease workflows for publishing new versions of the modules to pkg.go.dev.

### **RANDOM-STANDUP** List Randomizer CLI Tool | Go, GitHub Actions

**Mar 2021–Present | github.com/jidicula/random-standup**

- Wrote a Go CLI tool for randomizing order of team updates in a standup.
- Created CI/CD automations using GitHub Actions for running lint, unit, and build tests as well as autorelease workflows for publishing new versions of the tool to pkg.go.dev.

### **CANARY** Discord Bot | Python

**Dec 2016–2020 | github.com/idoneam/Canary**

- Founded and contributed to Canary, a McGill Discord chatbot.
- Wrote a feature that fetches current weather conditions and warnings from Environment Canada using the Requests and Beautiful Soup libraries.
- Wrote a feature that posts Métro service notifications using the Requests library and the Société de Transport de Montréal API.
- Enhanced code quality by reviewing contributors' patches to ensure elegant implementation and successful integration.
- Coordinated and delegated group efforts for bugfixes and 60 features by 17 contributors.
- Mentored and onboarded junior members by inviting new feature ideas and assigning them tickets suitable for beginners.

### **PRETINDER** Proof of Concept for Tinder Exploit | Python

**Dec 2016–Present | github.com/jidicula/pretinder**

- Exploited a Tinder RESTful API vulnerability to access premium features.
- Created a proof of concept using the Requests library to accept and parse JSON responses for profile images hidden from non-Premium users, then compare them to profile images in the deck via OpenCV cross-correlation template matching.

# EDUCATION

### **MCGILL UNIVERSITY** B.Sc. Anatomy and Cell Biology

**May 2020 | Montréal, QC, Canada**

# TECH

### **LANGUAGES**

**Advanced Knowledge of:**
Python • Bash • C
**Familiarity with:**
LaTeX • SQLite • R • MATLAB
MySQL • JavaScript • Java
Go

### **TOOLS & LIBRARIES**

Git • AWS • Debian GNU/Linux • Unix
macOS • Travis CI • HTML/CSS • Jira
Make • GDB • gprof • Emacs • Vim
GitHub Actions • Docker • Pandas
OpenCV • Flask • Requests • pytest
Poetry • Notion • Django • Streamlit
Jupyter Notebook • Sphinx

### **CONCEPTS**

**Advanced Knowledge of:**
Image Analysis • Computer Vision
Data Visualization • Asynchrony
Agile Development
Modular Programming
**Familiarity with:**
Multiprocessing • Data ETL
Automation • RESTful APIs
Machine Learning • Data Exploration