

# Johanan Idicula

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## Agile Developer That Leaves No Team Member Behind

### EMPLOYMENT

#### **SOFTWARE DEVELOPER** Cloud Platform Engineering, Shared Services Canada, Government of Canada Oct 2021–Nov 2021 | Remote

- Developed cloud landing zones using **Terraform** and **Go** infrastructure-as-code.

#### **SOFTWARE DEVELOPER** Digital HR, Department of National Defence, Government of Canada Oct 2020–Oct 2021 | Remote

- Developed an applicant tracking system in **Django** used by over 3000 applicants and 600 managers ([civilian-careers-defence.canada.ca](https://civilian-careers-defence.canada.ca)).
- Led 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**.
- Coached 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, shared knowledge about best practices for rebasing, cherry-picking, 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](https://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 laboratory information management systems with 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](https://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](https://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 in press | MATLAB

- Quantifies and visualizes cell monolayer deformation from microscopy images.

- **Cell Monolayer Deformation Microscopy reveals mechanical fragility of cell monolayers following EMT**, Biophysical Journal, 2022.  
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](https://github.com/jidicula/gamco-nav-check)

- Wrote a Go package ([github.com/jidicula/go-gamco](https://github.com/jidicula/go-gamco)) for wrapping GAMCO's API for their closed-end funds ([gabelli.com/funds/closed\\_ends](https://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](https://pkg.go.dev).

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

Mar 2021–Present | [github.com/jidicula/random-standup](https://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](https://pkg.go.dev).

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

Dec 2016–Present | [github.com/jidicula/pretinder](https://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

### **DUKE UNIVERSITY** Cloud Computing Foundations

Oct 2021 | Coursera

### **DUKE UNIVERSITY** Cloud Virtualization, Containers and APIs

Oct 2021 | Coursera

### **PLURALSIGHT** Terraform — Getting Started

Nov 2021 | Pluralsight

### **PLURALSIGHT** Concurrent Programming with Go

Nov 2021 | Pluralsight

### **PLURALSIGHT** Building Distributed Applications with Go

Dec 2021 | Pluralsight

## TECH

### **LANGUAGES**

**Advanced Knowledge of:**

Python • Bash • C

**Familiarity with:**

LaTeX • SQLite • R • MATLAB

MySQL • JavaScript • Java

Go • Terraform

### **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 • Concurrency

Agile Development

Infrastructure as Code

**Familiarity with:**

Multiprocessing • Data ETL

Automation • RESTful APIs

Machine Learning • Data Exploration