Johanan Idicula

Blog: forcepush.tech | GitHub: github.com/jidicula | LinkedIn: linkedin.com/in/jidicula
Stack Overflow: bit.ly/jidicula-stackoverflow
resume@johanan.dev | Saint-Lambert, QC, Canada

EMPLOYMENT

SOFTWARE ENGINEER III Actions Platform, GitHub
Jul 2022–present | Remote

- Shipping platform features and bugfixes to integrate GitHub Actions and GitHub Packages with GitHub Enterprise products and github.com using C#, Powershell, Bash, Kubernetes, Go, and Ruby.
- Created an end-to-end testing solution for GitHub Actions in GitHub AE.
- Managed an availability improvement effort for request routing in GitHub Actions.

SOFTWARE DEVELOPER Government of Canada
Oct 2020–Jul 2022 | Remote

- Cloud Operations Services, Employment and Social Development Canada:
  - Guided client teams in migrating their application workloads out of government data centres to Azure.
- Cloud Platform Engineering, Shared Services Canada:
  - Developed cloud landing zones in Azure using Terraform and Go infrastructure-as-code.
- Digital HR, Department of National Defence:
  - Developed an applicant tracking system in Django used by over 3000 applicants and 600 managers.
  - 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, and later ported to Azure Pipelines.
  - 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, cherrypicking, history editing, and merge conflict resolution.

SOFTWARE DEVELOPMENT CONSULTANT NeuroPoly, Polytechnique Montréal
Aug 2020–Mar 2021 | Montréal, QC, Canada

- 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, Canada

- 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, Canada

Worked with Professor Allen Ehrlicher on cell mechanics projects:

Probing the Mechanosensitivity of α-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 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. doi.org/10.1016/j.bpj.2022.01.003
  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

CLANG-FORMAT-ACTION GitHub Action for clang-format checks | Bash, Docker, GitHub Actions

Mar 2020–Present | github.com/jidicula/clang-format-action

- GitHub Action for running clang-format checks in CI, used by >1500 public repositories, including projects by Microsoft, Cisco, Facebook, Apache, Intel, Bytedance, and Spotify.
- Supports clang-format versions from 3.9 (2016) onwards, covered with end-to-end CI tests.

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

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

- Go package (**github.com/jidicula/go-gamco**) that wraps GAMCO's API for their closed-end funds (gabelli.com/funds/closed_ends).
- CLI tool that uses the above Go module to fetch the 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.

EDUCATION

MCGILL UNIVERSITY B.Sc. Anatomy and Cell Biology

May 2020 | Montréal, QC, Canada

PLURALSIGHT Terraform — Getting Started

Nov 2021 | Pluralsight

PLURALSIGHT Concurrent Programming with Go

Nov 2021 | Pluralsight

PLURALSIGHT Building Distributed Applications with Go

Dec 2021 | Pluralsight

DUKE UNIVERSITY Building Cloud Computing Solutions at Scale

Jan 2022 | Coursera

TECH

LANGUAGES

Advanced Knowledge of:
Python • Bash • Go
Familiarity with:
LaTeX • SQLite • R • MATLAB
MySQL • JavaScript • Java
C • Terraform • C# • Powershell
Ruby

TOOLS & LIBRARIES

Git • Azure • Debian GNU/Linux • Unix
Kubernetes & Docker • macOS
Travis CI • HTML/CSS • Jira •
Make • GDB • gprof • Emacs
Vim • Pandas • OpenCV • Flask
Requests • pytest • Poetry • Django
Jupyter • Sphinx • OpenTelemetry
Datadog • Kusto • Splunk

CONCEPTS

Advanced Knowledge of:
Image Analysis • Computer Vision
Data Visualization • Concurrency
Agile Development
Infrastructure as Code
Familiarity with:
Data ETL • RESTful APIs
Machine Learning • Data Exploration