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 GraphQL API Platform, GitHub
Jul 2022–present | Remote

- Shipping platform features and bugfixes for GitHub's GraphQL API, including safe GraphQL gem upgrades, performance and availability improvements, and database optimizations.
- Previously a GitHub Actions Platform engineer:
  - Shipped 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.
- Provided 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.

CLOUDFLARE-CACHEBUSTER Azure Function in Go that purges a site's Cloudflare cache | Go, GitHub Actions, Azure Functions, Cloudflare
Jul 2022–Present | github.com/jidicula/cloudflare-cachebuster
- **Azure Function** written in Go that proxies a call to Cloudflare's `purge_cache` API endpoint to purge a site's cache.
- I use this tool for building my personal website! This function purges the cache of forcepush.tech, invoked via a post-deploy POST hook in **Netlify**.
- Previously deployed as a **Google Cloud Function** — read my writeup at bit.ly/cloudflare-cachebuster-gcp.
- Created CD automation using **GitHub Actions** build and deploy the serverless function as well as autorelease workflows for publishing new versions of the module 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