# Saad Makrod

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#### **EDUCATION**

University of Toronto Sept 2020 - Present

Honours Bachelor of Science - Computer Science; Minor in Economics; GPA: 3.77/4.0; Dean's List

Courses: Design and Analysis of Data Structures, Algorithm Design and Analysis, Computability and Computational Complexity, Software Tools and Systems Programming, Operating Systems, Introduction to Machine Learning and Data Mining, Artificial Intelligence

#### SKILLS SUMMARY

 $\bullet$  Languages: Python, JavaScript, TypeScript, C, C#, Java, PHP, HTML, CSS, SQL

• Frameworks: Express, Django, Spring Boot, .NET, React, MAMP, Bootstrap, Material UI

• Tools: Git, PostgreSQL, MySQL, SQLite, MongoDB, Neo4j, Docker, Postman, Heroku, Figma, Jira, Confluence

• Soft Skills: Time Management, Organization, Communication, Independent Learning, Teamwork

## EXPERIENCE

#### Guidewire Software | Developer Consultant

May 2024 - Present

Mobile: 647-561-9487

Portfolio: s-makrod.github.io

Github: github.com/s-makrod

• Developing automation tool using Java to fix critical vulnerabilities in client applications and increase developer productivity

#### African Impact Initiative | Software Engineer

June 2023 - May 2024

- Constructed email service using Django to allow HTML formatted emails to be sent to user base via simple API
- Led development team and improved developer experience through GitHub Hooks, GitHub Pipelines, and ESLint
- Architected and built routing layer for React Redux app capable of controlling user access and toggling navigation styles
- Leveraged TypeScript generics to develop service layer with custom HTTP client enabling communication with REST APIs

### University of Toronto | Teaching Assistant

Fall 2021, Fall 2022, Winter 2024

• Taught fundamentals of testing, complexity, algorithms, and data processing using Python, Jupyter, and SQL

#### EcoOnline Global | Software Developer

Sept 2023 - Dec 2023

- Created **Datadog** pipeline to correctly classify info, debug, error, and warning status of logs for **traceability** purposes
- Developed application monitoring library using Prometheus, C#, and .NET providing services telemetry abilities
- Built HTTP client factory and API clients to create extensible interface when communicating with external applications
- Orchestrated load test using Docker and Grafana k6 simulating 20,000 users and 150,000 requests via Kafka and REST

#### OMERS | Backend Developer

Jan 2023 - April 2023

- Built microservices in agile environment using Java, Spring Boot, Google Cloud Platform, and Apache Camel
- Automated management of semantic versioning using GitHub Pipelines when publishing JARs to Maven repositories
- Developed in-memory caching system using aspect-oriented programming cutting run time of regression tests by 70%
- Enhanced validation framework using Spring Constraint Validator reducing complexity of managing payload validations

## University of Toronto T-CAIREM | Full Stack Developer

May 2022 - Jan 2023

- Collaborated with stakeholders to efficiently deliver **Django** and **React** single-page app with **Redux** architecture
- Architected PostgreSQL database schema defining relations between users, resource entities, and access control
- Designed and built content management system equipped with analytic dashboard using React and Chart.js
- Implemented authentication system integrated with client-side Google OAuth2 using JavaScript, Python, and Axios

# Royal Bank of Canada | Cyber Security Analyst

Jan 2022 - Apr 2022

- Implemented LDAP authentication system integrated with RBC Azure Active Directory using Python
- Developed search API using Django allowing users to build advanced queries on Microsoft SQL certificate database
- Constructed X.509 certificate parser using Python allowing users to upload and download certificates in Django app
- Built API on IBM Mainframe using hashing algorithms and Rexx cutting creation time of cryptographic keys by over 50%

# $Microsoft \mid Product \ Marketing \ Intern$

July 2019 - Aug 2019

• Launched internal inventory tracker that smoothened inventory management for over 2000 employees using Microsoft Power Platform, later presented at the Microsoft Canada Annual General Meeting