

Alex Moica

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Hi, I'm Alex. I'm a software engineer with 4 years of professional experience and a solid foundation in popular programming languages, web technologies, databases, and frameworks. I've had a lot of diverse experiences throughout my career, including building a language learning startup with over 1000 active daily users around the world, 4D pathfinding algorithms for lunar rovers, wireless power transmission to sensors embedded in bridges, and a full-stack course that is in use for 100+ high school students in Ontario.

EDUCATION

Bachelor of Engineering (Software Engineering)

McMaster University

EXPERIENCE

Founder

Noo Speak | January 2024 - June 2024

- Developed noospeak.com, a language learning newsletter web-app in Django over 5 months, growing to over 1000 active users with a 5x industry standard open rate and 10x click through rate. As a result, I became highly proficient in all aspects of building a technical product, including full stack development, QA, CI/CD, DevOps, user testing, scalability and reliability of service, version control, cybersecurity, API development, database management, monitoring/logging, UX/UI design, and more.

Software Developer

Aversan | November 2023 - January 2024

- 3-month contract to lead the biometric software testing for medical devices, covering tool validation, unit testing, static analysis, SAST and SCA remediations, and the creation of test documentation.

Development Lead

SGAC | June 2023 - October 2023

- Led the development of pathfinding algorithms for autonomous lunar rovers, with a focus on demonstrating the efficiency and collision avoidance benefits of 4D LIDAR in rover swarms.
- Publication Link: <https://iafastro.directory/iac/paper/id/76972/summary/>
- Github Link: https://github.com/alexmoica/LunarLiDAR_IAC/

Software Developer

Clio | January 2022 - August 2022

- Developed Clio's Outlook integration following SCRUM methodology with a team of 4 developers, enabling clients to seamlessly file millions of emails to Clio's management platform.

- Designed and implemented an endpoint feature for selective re-filing of individual emails, enhancing user control and addressing a critical user concern.
- Investigated, identified, and resolved the top 20 major issues reported for the Clio Outlook integration, leading to enhanced performance and an improved user experience.

Full Stack Course Developer

CreationCamp | September 2021 - April 2022

- Developed and taught a 4-month long full stack web development course for a class of high school students, covering HTML, CSS, JavaScript, MongoDB, Express, React, and Node.js.
- Designed, developed, and taught web development workshops to 100+ high school students.

Cloud Software Developer Intern

SOTI | May 2021 - August 2021

- Migrated 84 backend frameworks to .NET, resolving dependencies and writing full test coverage.
- Implemented application-side caching, and performed data analysis to show a reduction of over 90% in SQL server calls per minute.

President

McMaster Engineering Society | March 2020 - March 2021

- Led a 28-person team in managing a \$750,000 budget to enhance student education and support various areas such as wellness, advocacy, events, and engineering culture.
- Advocated on behalf of over 5,500 students to McMaster University, adjudicatory bodies, and provincial/federal organizations regarding legal, academic, and social issues.

PUBLICATIONS

Oussema Jouni, Alex Moica, Gavin Furtado, Eshana Mariam John, Varsha Santhosh, Daniel Asante, KangSan Kim, and Solomon Appekey. (2023) [4D LIDAR and Sensor Fusion for Autonomous Rover Missions](#). 74th International Astronautical Congress

PROJECTS

Utrition (2023): Utrition is an AI tool to help users track their progress towards their health goals. Users can upload a picture, speak, or type out their food in natural language, and Utrition provides all the nutritional data of the meal and saves it in the user's profile. The profile contains statistics and data visualizations to assist users in tracking their nutrition goals. **Stack:** Python, Flask, JavaScript, React, AJAX, Tensorflow, Git

DIY Drone (2023): Tandem rotor drone with positioning via IMU, waypoint navigation, onboard real-time status display, and wireless charging. Built and coded on an Arduino Nano microcontroller. **Stack:** Hardware, C++

SKILLS

Technical Skills: Python, Ruby, Java, JavaScript, HTML, CSS, React, Vue.js, Node.js, ROS2, Django, Ruby on Rails, SQL, PostgreSQL, MySQL, MongoDB, Docker, Linux (Ubuntu/Debian), REST API, Git, GitHub Actions, CI/CD, PyTest, Jest, Cypress, ESLint, Mocha, Prowler, Sinon, Snyk, Unittest, Pytest, RSpec, Jira, Stripe integrations, React Native

Languages: English (Native), Romanian (Fluent), French (Limited Working Proficiency)