



EWB Long Term Fellowship M-Shule

Role: Software Engineer

Venture: M-Shule

Website: <http://mshule.com>

Location: Nairobi, Kenya

Start Date: Full-time Training in Toronto (accommodation provided) beginning October 1st 2017, departure for placement October 22nd 2017

Duration: 3 weeks of training in Toronto, 12 months in Kenya

Engineers Without Borders Canada (EWB) is a Canadian NGO that invests in people and ventures to create a thriving and sustainable world. Bolstered by its network of 40 chapters and 1300 members, EWB provides seed funding, talent and mentorship to social enterprises throughout Sub-Saharan Africa. For more information on EWB, visit <http://ewb.ca/>.

The EWB Fellows Program

The EWB Fellows Program exists to develop a cadre of Systems Change Leaders by equipping them with the opportunities, competencies and skills needed to build a more thriving and sustainable world. Every year we recruit 25-30 outstanding people for the 12-month Fellowship, placing successful candidates in one of our early-stage Ventures located throughout Sub Saharan Africa. This Fellowship opportunity is with **M-Shule** and is based in **Nairobi, Kenya**.

About M-Shule

M-Shule, meaning “mobile school”, is the first adaptive, mobile learning management platform for 144 million primary school students across Sub-Saharan Africa. M-Shule uses artificial intelligence and child-centered education design to deliver a personalized learning experience to each learner and empower schools all through SMS and web. M-Shule is piloting in 2017 across 20+ primary schools in Nairobi, Kenya that teach more than 12,000 students. From there M-Shule will scale to educate millions of children and learning communities around the African continent and the world. Find out more on our [website](#), [Facebook](#) or [Twitter](#).



About the role

You will be a major part of a small and agile development team driving the first-ever application of artificial intelligence in primary schools in East Africa. We are looking for someone who is excited by the opportunity to draw from innovations in the international edtech space, and figure out how to apply them in a developing market. How do you deliver a transformational adaptive learning product when we can't rely on regular electricity, digital literacy, or a user interface more robust than simple text messages? That's what you get to find out!

We have already built and are implementing our initial pilot product in low-cost primary schools across Nairobi, Kenya. We now invite you to tackle projects like designing, building and improving the backend of our adaptive learning platform as well as our frontend UI as we switch to a more interactive framework (using VueJS or ReactJS). You'll be working on enterprise grade software systems, developing the API, creating endpoints and setting up the AWS suite to power the M-Shule platform. If you are a backend PHP developer with experience and interest building highly scalable digital products across East Africa, then our team is a great fit for you.

As a **Software Engineer** for **M-Shule**, your responsibilities will include:

- System architecture, development and platform-wide improvements to the existing Adaptive Learning Engine and learning platform, bringing in preferable expertise in machine learning, natural language processing, and human-centered design.
- Contribute to the overall design and development of the products we build and support, with a focus on scalability, usability, maintainability, and performance.
- Brainstorming and dreaming up powerful new features that will improve the learning experience of our learners and create more value for school directors and teachers.
- Work collaboratively with the rest of the technology team, coordinating and participating in the project's life-cycle.
- Keeping up with the essentials: testing, bug fixes, deployment, and documentation.
- Active participation in community events, trade meetups, and industry workshops in Nairobi and globally.



Sound exciting? Here's who we are looking for.

Skills & Requirements

A desire to impact education, the ability to make a long-term commitment to your team and the product, and exceptional problem-solving abilities are all essential prerequisites on the M-Shule team. For this role, we're also looking for someone with the following:

- Post-secondary education in software engineering, computer science or related education from a university or design/tech school required
- Some professional experience in software development after completing an undergraduate degree
- Strong CS fundamentals, including good working knowledge of classic algorithms, object-oriented design, architectural patterns and data structures
- Professional experience in MVC PHP and Relational database
- Working knowledge of DevOps software development practices and tools including continuous integration and deployment
- Interest in Data Analysis & Machine Learning (extensive experience is not required)
- Enthusiasm and commitment to collaboration across cross-cultural teams.

Preferred Qualifications:

- Comprehension of full stack web development using MVC/HMVC frameworks and other libraries such as Laravel, Django and HTML5.
- Demonstrable experience with R, Python, AWS and SMS technology;
- Knowledge of professional software engineering practices and best practices for the full software development life cycle, including coding standards, code reviews, source control management, build processes, testing, and operations;
- Experience with TDD, Continuous Integration and Continuous Deployment.
- Extensive experience in developing high-volume API (RESTful JSON) web services.
- Strong communication skills. You can clearly articulate your point of view.
- Proven ability to self-manage with excellent time management skills and attention to detail.
- Working knowledge of machine learning and adaptive systems;
- Knowledge of secure application and fundamental network security principles;



Please note: You must be a Canadian citizen or permanent resident in order to apply. No exceptions.

Compensation

All costs relating to the placement are either paid for directly by EWB (airfare, insurance, vaccinations, and trainings) or indirectly through a living stipend, which covers food, living expenses, local travel, etc. Fellows also receive an honorarium that can be used to assist with repatriation costs that is provided after completion of 12 month contract. The stipend covers basic living expenses for a modest lifestyle in your placement country. You should not expect to save money during this year or use the stipend to cover previous expenses (ex. student loans).

Additionally, EWB offers a range of benefits including insurance, a settlement allowance, professional development opportunities, and more.

Application Instructions

Submitting your application for the EWB Fellowship involves two steps:

Step 1: Under the subject line "Software Engineer - M-Shule", submit your CV/Resume to ltfrecruitment@ewb.ca.

Step 2: Complete the [following online application form](#).

We **highly encourage** applicants to apply for more than one role as this is a highly competitive program. If you would like to submit your candidacy to more than one role, please fill out separate forms.

Applications will be reviewed, and interviews scheduled on a rolling basis, so please submit your application as soon as possible. If the posting is still on our website, consider the role available.

For further detail about EWB, please read our Fellowship FAQ, [our website](#).