MIT Job Description

Job Title: SRS Technical Staff	**Position Title:** Software Developer
Reports to: Professor Hal Abelson	**% Effort:** 100
Department: CSAIL	**Prepared by:** Hal Abelson and Nico Lang
Date: March 14, 2016	

Project Overview:

The MIT App Inventor team builds, supports, does educational outreach, and conducts research on the MIT App Inventor platform specifically, and computer science education more generally. App Inventor is used by more than 300 thousand monthly users, from countries around the world, both in classrooms, informal educational settings and by developers and researchers. App Inventor operates as a hosted service on Google App Engine and Google Compute Engine. It lets beginning students and others without prior programming experience create mobile applications for Android devices. Over 13 million apps have been built with App Inventor. The team is embarking on a four-year pilot study of a Scratch and MIT App Inventor based curriculum in 30 primary schools in Hong Kong.

Position Overview:

We are seeking an experienced software engineer/programmer to play a key role in the evolution, operation, and educational research use of MIT App Inventor. The App Inventor software developer is expected to function as a core leader both in App Inventor technology and also in the community of students, teachers, hobbyists and others surrounding App Inventor. The Software Developer will make modifications to an instance of App Inventor and Scratch to enable data collection for project research. This position will collaborate closely with colleagues from Hong Kong working on the "Fostering Computational Thinking for Hong Kong Senior Primary School Students" project to ensure that the computational platforms run successfully in the schools with which the team will be working.

Note: This position is a two year funded position with potential to renew.

**Principal Duties and Responsibilities:

Specific duties include:
- Develop and test major platform components by working with the project team to identify the new needed applications and improvements directly related to the "Fostering Computational Thinking for Hong Kong Senior Primary School Students" project.
- Play a key role in the continuing design and development of App Inventor (with initial development work in Java and Javascript with Google App Engine) by developing new components and extensions for App Inventor, as they become needed for this project.
- Modify App Inventor and an instance of Scratch to enable data collection for project research.
- Work with the Hong Kong project team to ensure that both computational platforms run successfully in the schools with which the team will be working.

- Support and communicate with the community of researchers and educators using App Inventor.
- Interact with other leaders in the educational technology community.
- Make public presentations about App Inventor work.
- Other projects as required.

Supervision Received:
Receives supervision from the Director of MIT App Inventor and the Director of Software Development.

Supervision Exercised:
Supervises the work of MIT students on the project.

Qualifications & Skills Required:
REQUIRED:
- Bachelor's Degree in computer science/computer engineering or a related engineering field.
- A minimum of 5 years experience with significant public facing systems and experience in production software with significant responsibility for large implementations.
- Familiarity with Java, JavaScript and the Android platform.
- Comfortable with a variety of programming paradigms, including functional programming in dynamic languages, server-side technologies, and Web client technologies like AJAX.
- Experience as member of a development team that has implemented a substantial system that has been successfully deployed to a diverse set of users in a Web environment.
- Previous operational responsibility for an extensive system with thousands of active users.
- Excellent communication and presentation skills.
- Familiarity with current work in educational technology, including App Inventor, Scratch and StarLogo TNG.
- Ability to participate in the global research community around educational technology and the design of programming tools for learners.
- Demonstrated passion for education and for fostering creativity.
- Ability to work as part of a diverse, creative team.
- Ability to travel internationally 1 or 2 times per year and present work as needed.

PREFERRED:
- Master's degree in a relevant technical field
- Fluency in Cantonese desirable

Target Start Date: May 1, 2016