Background

In the Fall of 2019, University of Toronto students enrolled in CSC301 (Introduction to Software Engineering) will be developing software projects in teams of 5-7 with the goal of solving a problem. We are offering them the option to work on projects proposed by partner organizations (non-profits, startups, small businesses, etc.). In the past few years we have seen great projects developed by students over the course of a term (September-December). The students are generally in their third or fourth year of study in Computer Science and many of them have professional working experience (e.g., as interns). They will be led by experienced Teaching Assistants who have professional experience as software engineers.

Software Project

Students will develop a **minimum viable product (software)**. This MVP is the **solution to a problem for a specific set of users** that are defined by the partners. The software can be a web application, mobile app, desktop application or any other type of software. Students will work with partners to define the scope of the project and aim to deliver the minimum viable product by the end of the term. You can see some examples below of general student work:

Resume management applications for recruiters

Mobile App for helping men choose stylish clothes

Electronic Circuit Design Web application

Productivity & Procrastination Monitoring Application

You can see an example of a great proposal that led to a successful project <u>here</u>. Some common functionalities among many proposals include:

- Multiple user types with different needs
- geolocation/map features
- Communication on the platform among users
- Posting text, images, videos on the website/platform for other users to see, download, comment, engage with
- Visualizing data using bar graphs, pie charts
- Running reports showing aggregation of data created
- Using calendar-related features
- · ...

Program Requirements and Expectations

- Projects must have a considerable software component. This could include a
 website, mobile app, integration, or other similar technical projects. More advanced
 projects with significant hardware, machine learning and/or cryptocurrency
 components are acceptable but are less likely to be assigned a team given the
 complexity involved. Other purely hardware, machine learning, cryptocurrency, etc.
 projects may not be accepted.
- We will not accept projects are generic in nature (e.g., generic content management software, blogging tools, static/simple websites, etc.). We encourage partners to use existing software solutions that are used by many.
- If you project fits the criteria, we will allow the students to choose your projects; however, your project may not be selected by any team. We will update you either way.
- Partners must be able to work with the teaching team and the students throughout the term (September 23- December 9). The partner must designate at least one individual to lead the project who can make themselves available at least once every 2 weeks to meet (in-person, online or via phone) with the students or the teaching team.
- Students may choose to volunteer their time after the course is finished; however, this is not a requirement and the partners need to be able to use the delivered project on their own.

General Process and timeline

The process involves the following steps:

- 1. You will submit your proposal. If you have any questions or doubts or need help clarifying the scope, you can join our webinar (see below for details) or email David at david.jorjani@utoronto.ca
- 2. We will review the proposals and identify the projects that are a good fit for the course
- 3. Students will review the submitted projects and rank the ones that they want to work on.
- 4. The teaching team will select which teams will be assigned to each project based on the project requirements and the skills of the students.
- 5. Selected partners will be contacted to have an initial introductory meeting/call with the partners to discuss scope, expectations, timelines, communication methods and frequency, etc. If an agreement is reached, the students start working on the project. If an agreement is not reached, students may work with other partners. At least one member of the teaching team will be present to facilitate the discussion.
- 6. We will notify the partners whose projects have not been selected.
- 7. Partners work with students to define the functionality of the software and the expected outcome.

- 8. Students will submit their work in the middle of the project and allow the partners to give feedback to be incorporated in the final version.
- 9. Students submit their final work and present to the teaching team. Partners are welcome to join the presentation.
- 10. Project ends. Students have no obligation to continue working on the project or maintain it. Partners and students may *choose* to continue working together at their own discretion.

How to submit a proposal

Interested partners can <u>submit a proposal</u> **by September 15th at 9pm EST**. If you have any questions, please don't hesitate to contact David Jorjani.

david.jorjani@utoronto.ca

Tips on good proposals and our webinar

Please provide as much detail as you can in your proposal to help us understand your project more deeply. This will allow the students to know in advance and increases the chances of success for your project. We will host **webinars on**

- Wednesday September 4 Thursday September 5, 2019 at 5:30pm EST
- Thursday September 12 at 12pm EST

You can access them using this <u>link</u>. Please note that you may need a Google account to join.