



Student Research Opportunities -- Centre for Mobile Innovation (CMI) Research Projects

Part-time Position
Job Title: Mobile Application Developer; Mixed Reality Developer
Industry Partner: Cloud DX
Key Role: co-mentorship, equipment provider/access
Principle Investigator: Prof. Sasipriya Arun
Area of expertise: software design, software development, software engineering
HQP: key skills sets: Mobile Application Developer; Mobile Healthcare Software Developer
Project Summary:
<p>This section presents a description of the <i>CMI-CloudDX Project</i>.</p> <p>This research project involves continuing the collaborative work with Cloud DX. Cloud DX is a progressive medical company. Cloud DX won the 2017 XPRIZE recipient for 'Bold, Epic Innovation'. Since August 2017, many Sheridan students and faculty members have been involved in the research collaboration. Some of the faculty members included: Magdin Stoica, Rachel Jiang, David Horachek, and Ed Sykes. Our 'Clinic of the Future' includes a HoloLens application and a UWP app for a nurse's station that use the real-time vitals from Cloud DX's Vitaliti wearable.</p> <p>The apps use Cloud DX's Vitaliti wearable device pictured below. For more details, please see: https://www.clouddx.com/#/vitaliti We have presented our research output at numerous conferences such as the Singularity University Summit in Oct 11-12, 2017: http://singularityucanadasummit.org.</p> <p>In this phase of the project we are focusing on the development and refinement of Cloud DX's Vitaliti SDK. This SDK will provide software development tools to developers in one installable package. We envision this SDK will support rapid, efficient and innovative software solutions to be created for Android, iOS, and Microsoft platforms using Cloud DX's Vitaliti device.</p> <p>Future Enhancements, if time permits will be considered as the project unfolds.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Time and Schedule:</p> <ul style="list-style-type: none"> • 10 - 13 h / Week • 60% - 70% - Face-2-Face Teamwork (remote work due to COVID) <p>Dates:</p> <ul style="list-style-type: none"> • Jan 11, 2020 to Apr 23, 2020 (excludes reading week) <p>Remuneration:</p> <ul style="list-style-type: none"> • \$18 - \$22 / hour depending on experience and qualifications. <p>Technologies:</p> <ul style="list-style-type: none"> • C++ • C# • Java, Kotlin • iOS • Microsoft HoloLens • Microsoft Surface tablets • Unity

Responsibilities:

- Research emerging technologies, frameworks and techniques relevant to the research project
- Research and review literature as required by the research project
- Research 3rd party components that can be reused in the project
- Software development, software design, modeling and requirements analysis
- Test, debug and troubleshoot software applications developed for the research project
- Estimate and plan tasks that meet agreed upon deadlines
- Participate in team-meetings, prepare, participate in presentation meetings and communicate with industry partners under the supervision of the PI
- Work Face-2-Face with the team for the majority of the time dedicated to the project

Job Requirements (Required):

- Demonstrable experience developing universal applications capable on working on multiple device types (e.g. mobile, tablets and large-screen devices) using React Native, iOS App Development using Swift, Android App Development.
- Demonstrable mobile app development on Android and iOS platform
- Demonstrable knowledge of professional development practices, best-practices, using debugging techniques, unit-testing and software version control.
- Experience in designing and/or analyzing design visualized using UML
- Interest in developing healthcare mobile software systems
- Can-do attitude, resourceful, demonstrates initiative, creativity and passion for purposeful, result-oriented research
- Minimum 1 year academic experience in the Mobile Computing Degree program or 2 years and relevant COOP experience in a related diploma program.

Job Requirements (Beneficial / Good to have assets):

- Experience developing native applications
- Multi-threaded programming experience
- Experience in software modeling using Visual Paradigm
- Experience in communication using team tools such as MS Teams
- Experience in project planning and management using agile management tools such as Asana, MS Teams, BitBucket, Github, Jira, etc.
- Interest and experience in UI design, graphics and digital media design