2015 Middle School Summer Engineering Technology Program

Introduction to Mobile App Development

Introduce students to basic concepts of app development in a friendly, fun environment while designing and developing their first applications that can be run on Android devices.

Schedule

Monday - Getting Started, Events, Conditionals

- Review Syllabus
- Meet your class
- Fundamentals of App Development
- Mini App Demo
- Set up Stations
- Introduction to AppInventor 2
- Set up your portfolio
- Event-Response Behavior
- Conditionals

Tuesday - Drawing & Animation

- Coordinates in programming
- Variables
- Simple Drawing app
- Global vs Local Variables
- Timers & Timing in apps
- Simple Animations
- Pong Game
- Brainstorm ideas for Student Projects

Wednesday - Storing Data & User Location

- Displaying filling lists
- Storing Data → Persistence
- User Location
- Where's my car app
- Determine Student Projects

Thursday - Custom procedures & Algorithms

- Defining Custom procedures
- Algorithms
- Build Custom App
- Introduce students to Quality Assurance (Q&A)

Friday - QA & Demo Day!

- Q&A and Testing
- Students will demonstrate their applications to each other
- Tips and tricks to publish apps to the Play Store
- Overview of what it means to Open Source applications

Materials

The camp instructors will provide all resources required to participate (including work stations and test devices), but bringing some materials of your own could help the student get the most out of the camp.

Headphones

There are some supplemental videos provided that students can watch during the work sessions.

Laptop

Any Windows or Mac laptop will work since AppInventor runs in the browser. The laptop does need to have wifi, however basically all laptops have wifi.

USB Drive

Students who do not bring laptops will be working on school computers that are automatically wiped at the end of the day. Students are encouraged to bring USB drives they can save their work onto.
Uploading the files to Dropbox or Google Drive is an alternative to bringing a USB Drive.

Android Device

We are providing Android phones for each pair of students to test their apps on. Students are welcome to bring their own device to test the apps on there as well.