Offers 3 Weeks of Coding Camps @ Lovejoy ISD!

(Lovejoy Elementary School, 256 Country Club Rd. Allen, TX 75002 & Sloan Creek Intermediate, 440 Country Club Rd, Fairview, TX 75069)

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<td><strong>Session I:</strong> June 12-16</td>
<td>9am-12pm</td>
<td>Animations using Scratch (2-6 graders)</td>
<td>Lovejoy</td>
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<td>1-4pm</td>
<td>LittleBits Circuit Design (2-6 graders)</td>
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<td>Enjoyable Coding with Alice (6-12 graders)</td>
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<td><strong>Session II:</strong> June 19-23</td>
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<td>Adv Scratch: Game Design (2-6 graders)</td>
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<td><strong>Session III:</strong> July 10-14</td>
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<td>Mobile Apps: MIT App Inventor (6-12 graders)</td>
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<td>Engg Projects with Arduino (6-12 graders)</td>
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Weekly fee: $200 for half-day camp & $350 for full-day camp

Descriptions: see the following pages


Register @ [lovejoy.revtrak.net](http://lovejoy.revtrak.net)

Questions? csk12@utdallas.edu
Animations using Scratch
MIT Scratch is a GUI based programming environment. While it has a friendly interface that appeals to young children, it has tons of functionality! You can do 2D animations of objects, create cool drawings, make a character sing a tune, develop an interactive game (control it with various inputs including voice!) and even narrate a story with images! This camp is for beginners–no prior experience is required.

LittleBits Circuit design
LittleBits is a platform of easy-to-use electronic building blocks that empower you to invent anything, from your own remote-controlled car, to a smart home device. The Bits snap together with magnets, no soldering, no wiring and no programming needed. Click here to see more details.

Enjoyable Coding with Alice
This camp is perfect for middle school students who have not done any programming so far! It uses drag and drop programming, which means there is no dealing with syntax errors! You can convert your idea to code quickly and see it in action! You can code 3D animations or games with ease. Alice comes with a powerful graphics library that minimizes coding effort. Visit www.utdallas.edu/~jeyv/alice to preview the content. Since Alice does require “careful” drop operations, we do not recommend Elementary students to take Alice directly, we recommend them to do Scratch first.

Advanced Scratch: Game Design
Pre-requisite: Animation using Scratch
Once the students are comfortable with the basics covered in “Animations using Scratch”, they can take an advanced camp to develop games & make music. We will typically use multiple sprites (objects) and even multiple code segments for each object. We will use programming concepts to make music and even utilize randomness to change the tunes along the way. We will use sophisticated concepts like event-driven programming and cloning objects to complete advanced projects.

Circuits using MaKey MaKey kit
Circuits with MaKey MaKey kit uses a kit that lets you turn anything into a controller. No technical expertise is needed, letting your imagination run wild while you quickly prototype ideas and interactions. It’s basically a simplified Arduino processor that enables alternative ways for several inputs on your computer like mouse click, space, left-right-up-down keys, etc. through interesting objects like human body, vegetables, anything wet, pencil lead and almost anything that conducts electricity. We will be working “fun” projects every day! View the gallery of MaKey MaKey based projects @ makeymakey.com/gallery.
Enjoyable Coding with JavaScript

Pre-requisite: Enjoyable coding with Alice
This camp is perfect for students who have done a little bit of programming using Alice/Scratch/Robots, etc., but have not spent much time with C/C++/Java yet. While many high school students may be OK to start here without any prior programming experience, all novices are strongly encouraged to complete Alice camp first. This camp uses the Khan Academy JavaScript environment, which features a web-page with coding area and virtual canvas area for output. As you type the code, output appears/changes. This friendly environment comes with a powerful graphics library that minimizes coding effort. If you want to preview the camp content, visit www.utdallas.edu/~jeyv/kajs.

Introductory GameMaker
This camp is all about Game development! You do not need to have programming background to attend this camp. We will use GameMaker software in this camp. GameMaker enables us to assemble the building blocks and develop professional quality games quickly! After the campers get comfortable with the building blocks & drag-and-drop programming, scripting will be introduced to show a glimpse of advanced level capabilities of GameMaker.

Mobile Apps using MIT App Inventor
You have a great idea for mobile app, but do not know how to program in Java/Objective C? No worries. MIT App Inventor enables you to use drag-and-drop programming to put your creative ideas to work and make Android apps. It will be helpful to bring an Android phone to test your apps. While the drag-and-drop mechanism is easy to get used to, you will come across lots of components that need to come together to make a complex mobile application. We encourage the campers to complete Alice camp first.

Engineering Projects with Arduino
Arduino is a low-cost open-source MCU platform that can create easily designed electronics and homemade projects ranging from simple models to robots and satellites. With an unlimited spectrum of input and output add-ons like sensors, indicators, displays, motors etc. this hardware is great for hobbyists and engineers to create devices that can interact with the real world. This camp will not just help the students to use the board but will also enable them to build embedded systems around it.