If you are attending the CS UTDesign Expo, your kids are welcome to join any of the following workshops (free!):

**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! Go to scratch.mit.edu to check out the tool and lots of examples. We will use a specific list of examples shown in www.utdallas.edu/~jeyv/scratch. Scratch uses drag-and-drop programming which means no syntax errors – your program is always ready to run! It enables the young learners to focus on the logic instead. This workshop is for beginners—no prior experience is required.

**Animation & Games using Alice**

This workshop is perfect for middle school students who have not done any programming so far. It uses drag and drop programming, which means no 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 prefer them to start with Scratch.

**Drawings with JavaScript**

This workshop is perfect for students who have done a little bit of programming using Alice/Scratch/Rosbots, etc., but have not spent much time with C/C++/Java yet. While many high school students may be okay 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 webpage 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 workshop content, visit www.utdallas.edu/~jeyv/kajs.