

SFU APPLIED SCIENCES OUTREACH & SCIENCE ALIVE FREE YOUTH PROGRAMS



HOUR++ OF CODE

The Hour Plus Plus of Code program features various one-off workshops for school-age students to learn how to code and implement popular digital tools. Online workshops cover various topics ranging from user interface and experience design, programming logic foundations (in Python and Java), mobile app development, and game development. Please review the overview and requirements document for each workshop before registering. Not sure if coding is for you? Join us for these workshops and let us change your mind!

MOBILE APP DEV

Feb 22, 2025 | 10:00 am - 12:00 pm | Online | Grade 8-12

The Mobile App Dev workshop is open to Grade 8-12 students who are interested in how to plan, prototype, and code a mobile app. This workshop is beginner-friendly and will use [Thunkable](#), which is a drag-and-drop app builder. Don't forget to review the [workshop overview and requirements](#) before registering!

[REGISTER HERE](#)

UI/UX DESIGN (USER INTERFACE & USER EXPERIENCE DESIGN)

Mar 1, 2025 | 10:00 am - 12:00 pm | Online | Grade 8-12

The UI/UX Design workshop is open to Grade 8-12 students who are interested in creating designs for mobile and web interfaces. Students will learn about the importance of user interface and user experience design and use the browser-based design tool, [Figma](#), to prototype a mobile app. Don't forget to review the [workshop overview and requirements](#) before registering!

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INTRO TO HTML/CSS

Mar 15, 2025 | 10:00 am - 12:00 pm | Online | Grade 8-12

The Intro to HTML & CSS workshop is open to Grade 8-12 students who are interested in learning the basics of HTML and CSS and how to use them for making web pages. This workshop is beginner-friendly and will use [CodePen](#). Don't forget to review the [workshop overview and requirements](#) before registering!

[REGISTER HERE](#)

INTRO TO JAVASCRIPT

Mar 22, 2025 | 10:00 am - 12:00 pm | Online | Grade 8-12 |

The Intro to JavaScript workshop is open to Grade 8-12 students who are interested in learning the basics of the JavaScript programming language and how it is used to add interactivity to a website. This workshop requires some experience in HTML/CSS and will use [CodePen](#). Don't forget to review the [workshop overview and requirements](#) before registering!

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ALL GIRLS: INTRO TO HTML/CSS

Mar 8, 2025 | 10:00 am - 12:00 pm | Online | Grade 8-12

To celebrate International Women's Day, this session of the Intro to HTML & CSS workshop is for Grade 8-12 girls who are interested in learning the basics of HTML and CSS and how to use them for making web pages. This workshop is beginner-friendly and will use [CodePen](#). Don't forget to review the [workshop overview and requirements](#) before registering! Our all-girls programs welcome gender-diverse youth, including but not limited to cis girls, trans girls, non-binary youth, gender non-conforming youth and genderqueer youth.

[REGISTER HERE](#)

ALL GIRLS: INTRO TO JAVASCRIPT

Mar 8, 2025 | 1:00 pm - 3:00 pm | Online | Grade 8-12 |

To celebrate International Women's Day, this session of the Intro to JavaScript workshop is open to Grade 8-12 girls who are interested in learning the basics of the JavaScript programming language and how it is used to add interactivity to a website. This workshop requires some experience in HTML/CSS and will use [CodePen](#). Don't forget to review the [workshop overview and requirements](#) before registering! Our all-girls programs welcome gender-diverse youth, including but not limited to cis girls, trans girls, non-binary youth, gender non-conforming youth and genderqueer youth.

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STEM SPEAKER SERIES



STEM SPEAKER SERIES

The STEM Speaker Series provides high school students with the opportunity to learn about STEM topics and careers through the expertise and perspectives of university students, faculty members, and working professionals in STEM fields. See presentation topics below. You can also check out past events here: <https://sciencealive.ca/sss-past-speakers>

Human-centered design of a self-monitoring tool for learning

Feb 22, 2025 | 1:00 pm - 2:00 pm | Online | Grade 8-12

Guest Speaker: *Rimika Chaudhury* is a final year PhD student in Computer Science, specializing in Human Computer Interaction. Before her graduate studies, Rimika gained professional experience as a technology educator in an Information Technology company and then as a User Experience designer in a financial technology company during her Masters. Besides research, three other things that she loves are - food, cats, and story-telling.

Presentation Description: In this presentation, I will talk a bit about my background as a software developer and educator, and talk about what inspired me to pursue the field of human-computer interaction design. Next, I will talk about how human-centered design principles can support the development of more user-friendly software tools. As an example, I will describe the process I followed in my graduate work while developing a self-monitoring tool for learning.

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My journey as a computing science undergrad

Mar 15, 2025 | 1:00 pm - 2:00 pm | Online | Grade 8-12

Guest Speaker: *Jin Song* is a fourth year computing science (CS) student at SFU! She has been interested in STEM ever since she was a kid—her mom told her that she used to go around with a “Dr. Song” name tag and perform all sorts of science experiments with the limited supplies found in their house. For as long as she remembered, Jin wanted to be an inventor or chemist, but had not, in fact, become a chemist. She is hoping to finish her CS degree soon and is currently working on many side projects.

Presentation Description: This presentation will cover my perspective as a CS undergrad student at SFU. I will talk about why I went into CS, what I’ve been learning in my courses, and some projects I have done. I will talk about how CS is a really broad field with applications in pretty much every industry in modern times since we are living in a “digital era.” I will also showcase my most recent project (web publishing site) and go over my workflow as a full stack solo(ish) developer.

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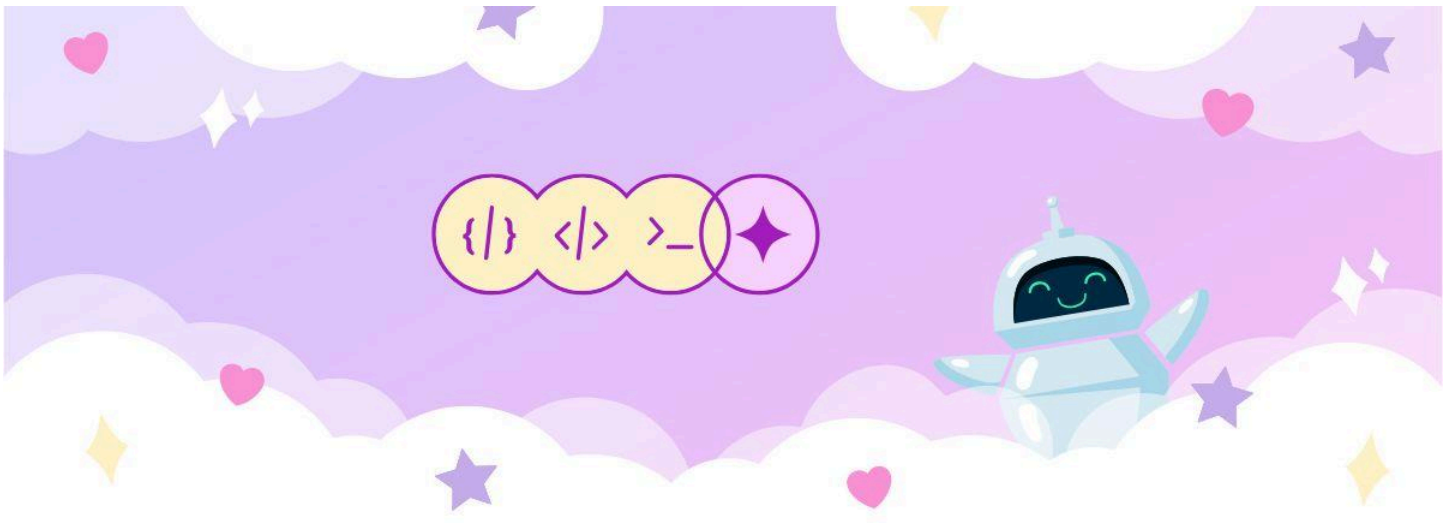
Using Sound Waves to Inspect Cracks in Train Systems

April 26, 2025 | 1:00 pm - 2:00 pm | Online | Grade 8-12

Guest Speaker: Zhen (Lisa) Li is a PhD student in the Vehicle-Track Interaction Research Group at SFU, supervised by Dr. Kevin Oldknow. She completed her undergraduate degree in Mechatronic Systems Engineering at SFU before diving into research on railway transportation systems. Her work focuses on using sound waves to inspect surface-level damage, such as shallow cracks, in train wheels and tracks. Besides that, Lisa is also interested in clean energy and machine learning.

Presentation Description: In this presentation, I will first share my academic journey, from my undergraduate studies in Mechatronic Systems Engineering (MSE) to my PhD research. For this part, I will explain how my initial interest in transportation led me to pursue engineering, what I learned from MSE, and my current focus on railway transportation. Next, I will talk about two essential concepts of my research—surface damage on railway components caused by wheels rolling on the rails and how sound waves can be used to detect these tiny cracks. Then, I will also describe my current work and outcomes.

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GO CODE GIRL 2025

Mar 1, 2025 | 10:00 AM - 2:00 PM | Grade 7-10 | SFU Surrey Campus

In partnership with the Ontario Network for Women in Engineering (ONWIE), and SFU's Women in Engineering, SFU's Faculty of Applied Sciences invites *girls (grades 7 - 10) to learn more about the wonderful world of computer science. Please join us for this FREE event where girls will have fun participating in a hands-on activity and learn about the possibilities of computer science as a career choice. Limited space is available so sign up today! No prior experience with coding required!

*As part of our efforts to create inclusive, bias-free learning environments that advance gender equity, our Girls and Young Women Programs welcome gender-diverse youth, including but not limited to cis girls, trans girls, non-binary youth, gender non-conforming youth.

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Interested in hearing more about Science ALIVE programs throughout the year? Sign-up for our monthly newsletter which lists our current free and paid youth programs in a community near you as well as teacher professional development opportunities and resources.

[APPLY TO WORK AT SCIENCE ALIVE](#)

[APPLY TO VOLUNTEER AT SCIENCE ALIVE](#)

Interested in working or volunteering with Science ALIVE? Check out our application pages for more information.

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