



Xtreme Talent Accelerator Program (XTAP)

Front-End Development with Angular

OVERVIEW



10-12 Weeks



20+ Hours/Week



Front-End Developer
Certificate

Angular is a popular open-source web application framework. As front-end development constantly evolves, a specialization in Angular will enable you to stand out and qualify for multiple job roles. Through this part-time virtual and hands-on workshop, you'll gain valuable in-demand skills to add to your toolbox.

WHO IS THIS FOR?

You are a developer looking to acquire additional skills needed to further advance your career in your current organization.

This workshop may be right for you if:

- You're a back-end developer seeking to learn front-end skills to become a full-stack developer, or
- You're seeking to upgrade your front-end skills with a specialization in Angular.

ELIGIBILITY

We invite you to apply if:

- You're a resident of Ontario, and
- You're 18 years or older, and
- You're a Canadian Citizen, Permanent Resident or Protected Person
- If you work in a full-time position, your employer is in Ontario and is willing to endorse your participation, including approving the time you will need to participate in the program. (For further details, see our [Information for Employers fact sheet](#)). If you are unemployed or working on a part-time basis, this eligibility requirement is not applicable to you.

This program requires a commitment of 20+ hours per week. That time consists of up to four hours per week during business hours to attend two live lectures (one to two hours in duration, depending on the topic). Additional daytime support from instructors will be available to participants as needed. The remaining hours include group projects, reading assignments and other self-paced work that you can complete during evenings and weekends.

WHAT YOU WILL LEARN

Designed and delivered by Lighthouse Labs, the program includes Web Development Fundamentals and Front-End Development with Angular, as well as an opportunity to take an additional two-week session to learn Full-Stack C#.

Along with the technical subjects, you will have access to personal career services and workshops in communication, networking and personal branding, offered by XTAP, to help you improve your soft skills and feel more equipped to advance within your current organization.

Web Development Fundamentals

Your learning in this workshop will prepare you to:

- Write well-structured, easily maintained, accessible CSS and HTML code to present web pages in various ways.
- Manipulate the layout of HTML elements using margins, padding and floats.
- Create, modify and read HTML data attributes using JavaScript and jQuery.
- Apply techniques of responsive web design, including media queries.
- Apply the basic features of SASS.
- Create Git repositories, add and commit code, and push to GitHub.
- Explain and use first principles for writing maintainable and testable code.
- Debug code by reading error messages.
- Use FOCAL (any combination of functions, objects, callbacks, arrays and loops) within JavaScript and Node to form a valid solution to a challenge.
- Implement stylistic and organizational improvements to simple JavaScript/Node scripts.

Web Development Fundamentals (cont'd)

- Explain dependency management and use a package manager to import third-party JavaScript (JS) libraries such as Mocha and Chai.
- Write basic client-side JS to add dynamic content to pages.
- Use jQuery to bind event handlers and generate DOM elements.
- Use jQuery to manipulate CSS.
- Use AJAX to send and fetch information from a server and display it on a web page.
- Use JavaScript to validate form data.
- Analyze and compare complexity and performance of algorithms using Big O notation.

Front-End Development with Angular

Your learning in this workshop will prepare you to:

- Identify and use strategies for simultaneously learning a new programming language, ecosystem, framework, and codebase, while remaining productive.
- Explain the advantages of component-based UI development.
- Recognize Angular warnings and errors and use them to identify or prevent bugs.
- Create well-composed components from HTML and behaviour specifications.
- Use the Angular library and associated tooling (Webpack, Babel and Create Angular App) to build typical single-page web application features, including where there is an existing back-end API for data.
- Use new Angular functional components and classical class-based components with applicable lifecycle methods.
- Use modern AJAX libraries to Axios with Angular, to make asynchronous requests in appropriate/idiomatic ways.
- Use the Angular developer tools and Storybook for component development and inspection.
- Use common functional programming methods (map, reduce, filter, etc.) and other ES6 practices for data manipulation and JSX component rendering.
- Write unit tests for components using Jest.
- Write E2E tests for Angular applications using Cypress.
- Explain the differences between various automated testing strategies, as well as their benefits and drawbacks.

Full-Stack C#

- Navigate an existing codebase (C#) and use an existing code style and approach to implement new features for a web application.
- Apply previous learning tactics to research and become familiar with a new paradigm, language and framework.
- Identify and use strategies for simultaneously learning a new programming language, ecosystem, framework and codebase, while remaining productive.
- Use the fundamental elements of C# syntax (types, strings, numbers and If statements).
- Use OOP elements including classes and objects, method, properties and fields, for loops, arrays, exceptions, polymorphism, abstraction, interfaces, System.Object and Static classes.
- Use various collection types provided by the .NET framework to organize data.
- Use the ASP.NET MVC web framework, C# programming language and .NET framework to update and manage existing code for a web application.

EMPLOYMENT PREPARATION, ON-THE-JOB SKILLS, AND ETHICS AND EMPLOYEE ADVOCACY

These additional career services provided by XTAP cover:

- Tech, EQ and You: Exploring and Understanding Emotional Intelligence in Tech
- Designing Your Professional Digital Presence
- Personality Assessments
- Time Management
- Virtual Interviewing Skills for Incumbents
- Employee Rights in the Workplace

CAREER OUTLOOK

By the end of this program, you will have the upgraded skills that give you an opportunity to advance within your current organization. That can include:

- Access to new or more challenging — and rewarding — projects
- Increased responsibility for existing assignments
- Bringing new technical skills to your team
- Better compensation or a promotion

DATES AND APPLICATION DEADLINES

November 8, 2021 — January 28, 2022
Application deadline: October 3, 2021





Ready to advance your career?

An application takes only 5–10 minutes to complete. Plus, you will be able to save it and return to finish later.

[Apply Now](#)



investottawa.ca/xtreme-talent-accelerator



The Xtreme Talent Accelerator is made possible through the [SkillsAdvance Ontario \(SAO\) pilot project](#), with funding provided by the Government of Ontario, Ministry of Labour, Training and Skills Development.