Tool Install Checklist

Below is a list of the tools you should install before your first class to ensure you're ready to dive in on Day 1!

- Google Chrome
- Smoothstack Microsoft Office 365 account activation (**check your spam folders' if you have trouble finding the credentials**)
- MS Teams Chat for cohort team channel communication
- Learning Management Platform (LMS) activation
- Screencastify
- IDEs: Visual Studio Code, Eclipse or InteliJ
  - If using VS Code, add the "Open in Browser" extension
- git Bash (Windows OS ONLY)
- Terminal (Mac OS ONLY: pre-installed)
  - Can be accessed by holding the *command + space bar*
    - This will open Spotlight
    - Type "terminal" into the Spotlight text box and hit *enter*
- git
- Homebrew (Mac OS ONLY)
- Xcode (Mac OS ONLY)
- Debugging Basics
- Docker
- Python Ver 3.0
- Maven Ver 3.8.6
- Software Testing

You should also create accounts for the following:

- LinkedIn (if you don't already have an account)
- Slack (using Smoothstack email | installed on local machine and mobile device)
- Zoom app for class (not necessary to make an account)

Overview of Your Tools

Before installing your tools, take a moment to examine each of them in more detail to better understand the role they will play in the cohort.

Google Chrome

This is the web browser we'll be using to quickly determine whether our code is working. Google Chrome has a number of tools that make it an ideal platform for coding, so if you are currently using a different browser, we encourage you to switch to Chrome.

Microsoft Office 365

Upon activating your account, you will have access to MS Outlook for email and MS Teams which is where you will find your calendar invites for classes/sessions/meetings/etc. You will also have access to your personal SS OneDrive where you will create and store any SS documents for class and Capstone Project work.

Learning Management Platform (LMS)

Make sure to activate your LMS account **prior** to the start of class next week. This is a crucial part of your training during the cohort. This is where you will find all class materials, links to your Virtual Classroom sessions with Instructors, as well as links to Dry Run sessions and SCRUM ceremonies.

- o Click on "reset password"
- o Enter your Smoothstack email address
- o Log in (you will be prompted to change your password and save your profile settings)
- o Go to "My Learning Dashboard"

Zoom

Download the Zoom app on your local machine before class. It is not necessary to set up an account, but this will give you immediate access for your classes and any other sessions held throughout your training when not utilizing Teams meetings. If sessions will be held using Zoom instead of Teams, you will see a Zoom link in your calendar invite details instead of the option to *Join* a Teams meeting.

Screencastify

Screencastify is a free, lightweight extension for Google Chrome. You can use this **free** screen recorder to easily capture your desktop, browser, webcam, or certain applications. Ideal when creating GIFs/Visuals for your README.md files

Note: You must be using Google Chrome in order to install and use Screencastify.

1. Open Google Chrome.

2. Go to the Chrome Web Store and type **Screencastify** in the **Search Extensions** bar in the top left of the page. **Note:** You can also start by going to the Screencastify website and clicking the **Add to Chrome** button, which will take you directly to its listing in the Chrome Web Store.

3. Click the **Add to Chrome** button.

4. Click **Add extension**.

5. When the download is complete, click the gray film strip icon in the top-right corner of your browser screen to launch Screencastify.

Allow Webcam and Microphone Access

The first time you click on the Screencastify icon, you'll be asked to give Screencastify permission to access your webcam and microphone, which enables you to narrate over your recordings as well as record your webcam. You are required to allow access in order for the Screencastify extension to function properly. You do not need to include audio or video in your recordings, and Screencastify never records audio or video unless you expressly ask it to.

1. Click the **Setup Camera Access** button.

2. Click **Allow** in the pop-up window.

Slack

Slack is an online communication tool that is a mix of forum, instant messenger, and email all rolled into one. It's a tool used by countless organizations worldwide, and you'll be using it every single day over the course of training and during post-deployment. You should have received an invite to your Smoothstack Slack channel from HR. If you do not see the invite in your inbox, please check your **spam** folder in case the credentials were forwarded there.

We will use Slack to send code snippets during class, relay important announcements, and facilitate group exercises. You will receive the link to your cohort-specific channel prior to orientation. Though there is a Slack web client, for this cohort you should have the program installed on your machine and mobile device.

VS Code

Visual Studio (VS) Code is a free text editor that runs on Mac, Linux, and Windows operating systems. For developers, text editors provide ease of use and simplify coding.

When you start working in VS Code, you may notice that it wants to autocomplete your code while you're typing it. Don't be alarmed by this! VS Code has a built-in feature that can hint at autocompletion as you type. You don't have to use the suggestions that it provides, but this feature will save you time in the future as you continue to code.

You're not limited to VS Code though! Feel free to use an IDE that you feel familiar and comfortable with, but ensure that it operates with your project builds/deployments properly

Open in Browser (VS Code Extension)

VS Code is powerful in its ability to be extended through the use of plug-ins. This means that we can easily incorporate free add-ons that enable VS Code to make the process of coding even easier than before.

There are various extensions you can add but for now, the only extension we recommend installing with VS Code is the Open in Browser extension. This will allow you to open text files you are editing in VS Code in your web browser without having to go through File Explorer (Windows) or Finder (Mac).

git Bash and Terminal

git Bash (for Windows users) and Terminal (for Mac users) offer a command-line interface for working with the files and folders on your computer.

So, is it like Finder or Windows Explorer? Kind of, except that there are no pictures or visuals. It's just a box with text.

Over time, you'll come to understand that, in many situations, using a command-line interface can be faster and more effective than relying on the operating system's graphical user interface (GUI).

Windows ONLY

Step 1. Go to the Git [downloads](#) page. Select the download for Windows. It should automatically download the most up to date version, which is totally fine!

Step 2. Use Next to progress through the installation until you get to the screen that asks you to choose a default editor for Git. Select your IDE and click Next.

Step 3. When you see a prompt like **Checkout as-is, commit Unix-style line endings,** select this.

Step 4. Finally, select **Use Windows'** default console window.

Note: For Mac users, utilize the git downloads link above and follow the instructions for Mac OS

Xcode (Mac ONLY)

Xcode is a development suite exclusive to Mac. We will primarily be using IDEs such as VS Code, Eclipse, or InteliJ in this cohort, but installing Xcode will set up some of the other required programs including git, which coders depend on for logging the development of programs and applications.

Homebrew (Mac ONLY)

Homebrew is a Mac-specific tool kit that makes it easy to install a variety of applications using the command line. It can greatly simplify the installation process for various tools you'll be using throughout training and most importantly, your career.

Debugging Basics

As you proceed through the cohort, making use of browser-based debugging tools like [Chrome DevTools](#) will prepare you for how to test your code during training and post deployment. These tools will help flag troublesome lines of code that are difficult to spot.

These debugging tools are incredibly powerful. However, they're only as powerful as the developer who uses them.

Docker

Docker is a software platform that allows you to build, test, and deploy applications quickly. Docker packages software into standardized units called **containers** that have everything the software needs to run including libraries, system tools, code, and runtime. Using Docker, you can quickly deploy and scale applications into any environment and know your code will run.

Python Ver 3.0

Python will be a core language and technology that you will be utilizing throughout your cohort training. To ensure you are prepared, please download **Python Ver 3.0** and review the documentation. We have also included links to recommended reading materials to better ensure your success while in the training program. Please review the material links below before Day 1:

> **Introduction to Python**
>
> **Python Programming Language**

Maven Ver 3.8.6

Apache Maven 3.8.6 Download Instructions

Software Testing

Why is Testing Necessary?

Human errors can cause a **defect** or **failure** at any stage of the software development lifecycle. The results are classified as trivial or catastrophic, depending on the consequences of the error.

The requirement of rigorous testing and their associated documentation during the software development life cycle arises because of the below reasons:

- *To identify defects*
- *To reduce flaws in the component or system*
- *Increase the overall quality of the system*

There can also be a requirement to perform software testing to comply with legal requirements or industry-specific standards. These standards and rules can specify what kind of techniques we should use for product development.

Software Testing: A Key Aspect of Quality

The delivery of an optimal quality software product that has unique and innovative features has always been the priority of the software industry worldwide. However, without evaluating software

components under various expected and unexpected conditions, the team cannot guarantee these aspects. Therefore, testing is performed to test every software component large and small.

To come better prepared for Day 1 of class, please find the recommended Software Testing reading materials below:

[What Is Software Testing? All the Basics You Need to Know](#)

[Software Testing Tutorial | Beginner's Guide to Manual Testing](#)