

TFUI Technical Installation Guide

Introduction

This user interface uses the idea of nodes as code segments which map to TensorFlow functionality, which visually illustrate a machine learning model being created. These nodes are created with Angular which runs via an Angular CLI Server.

The entire user interface system is a web-application which mostly runs on the frontend and requires npm to run. The master branch of the repo on [github](#) will need to be cloned in order to get the latest available version.

The tools Git and npm are required to successfully install this system.

Prerequisites

The system requires *npm* and its respective dependencies in order to run, here's a list of the npm version needed and all the dependencies:

```
Npm v7.20.5
"@angular/animations": "^12.0.5",
"@angular/cdk": "^12.2.1",
"@angular/common": "^12.0.5",
"@angular/compiler": "^12.0.5",
"@angular/core": "^12.0.5",
"@angular/elements": "^12.2.1",
"@angular/forms": "^12.0.5",
"@angular/material": "^12.2.1",
"@angular/platform-browser": "^12.0.5",
"@angular/platform-browser-dynamic": "^12.0.5",
"@angular/router": "^12.0.5",
"@angular/service-worker": "^12.0.5",
"@ngxs/devtools-plugin": "^3.7.2",
"@ngxs/logger-plugin": "^3.7.2",
"@ngxs/storage-plugin": "^3.7.2",
"@ngxs/store": "^3.7.2",
"@syncfusion/ej2-angular-diagrams": "^19.2.56",
"@types/file-saver": "^2.0.3",
"d3": "^7.0.1",
"d3-lasso": "0.0.5",
"document-register-element": "^1.7.2",
"file-saver": "^2.0.5",
"fs": "0.0.1-security",
"interactjs": "^1.10.11",
"leader-line-new": "^1.1.9",
"rxjs": "~6.6.0",
"tslib": "^2.3.1",
```

```
"zone.js": "~0.11.4"
```

The system also requires our github repo to be cloned

Installation

Open your command prompt and navigate to the folder where you want to install the system. This can be done with the 'cd' command:

```
1. >cd C:\Users\Intel\Documents\Computer Science
```

Start by cloning the repo with:

```
2. >gh repo clone COS301-SE-2021/TensorFlow-UI
```

If this doesn't work, try this command instead:

```
>git clone https://github.com/COS301-SE-2021/TensorFlow-UI
```

Once you successfully clone the repository, the entire system will be under a folder called 'TensorFlow-UI'

Navigate to the TensorFlow-UI folder, and into the Frontend folder.

```
3. cd C:\Users\Intel\Documents\Computer Science\TensorFlow-UI\Frontend
```

Run the command 'npm install' to automatically download all the dependencies required:

```
4. >npm install
```

Or download the packages manually with:

```
>npm install DependencyName
```

Running

In order to run the program, run 'npm install' if you haven't already done so. Refer to Step 4 in the Installation section.

Next, you can build the application with:

```
>npm run ng build
```

Or run it directly with this command, which builds automatically:

```
>npm run ng serve
```

The server will be available on <http://localhost:4200/>

Please refer to our User Manual for a detailed description of the system and how to use it.

Link:

Future

The plan is to turn this web-app into a PWA executable which can be installed and run both on mobile devices and on computers and not only runnable through the browser.