

Research Recommender README

Requirements :

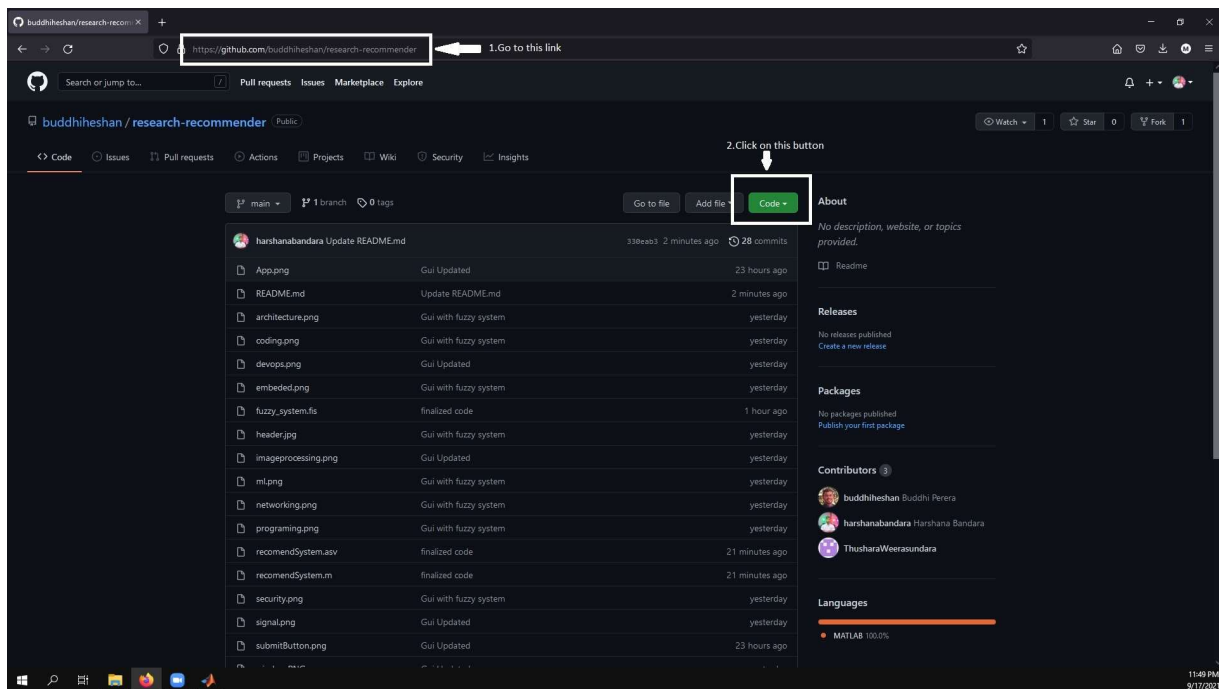
Windows computer with MATLAB 2018 or MATLAB 2021 installed on it:

We tested this application on MATLAB 2018 and 2021 versions. The other MATLAB versions might support this application but we DO NOT guarantee it.

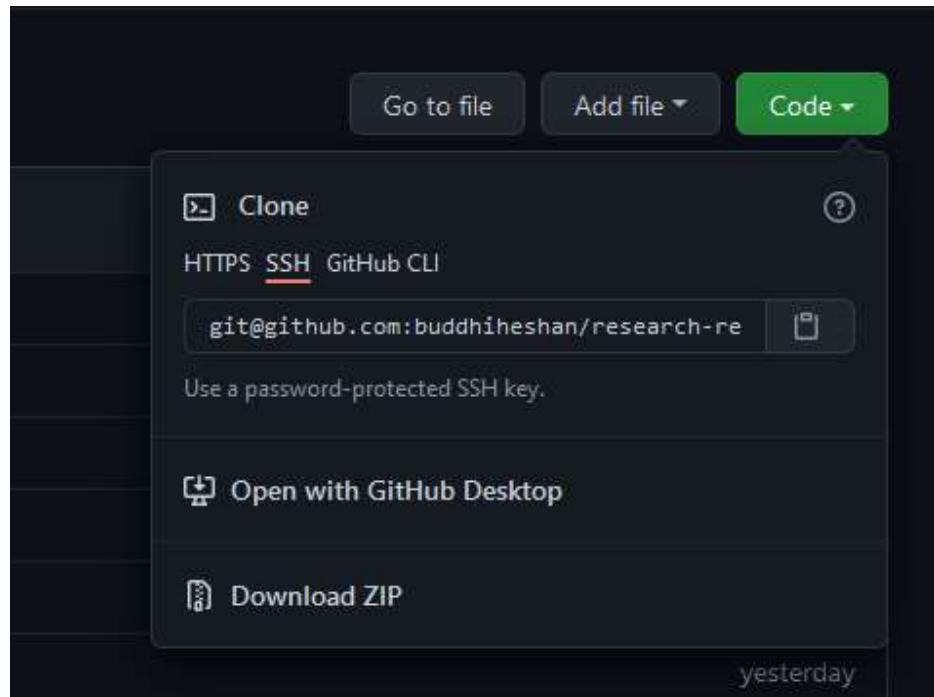
Internet Connection

Steps

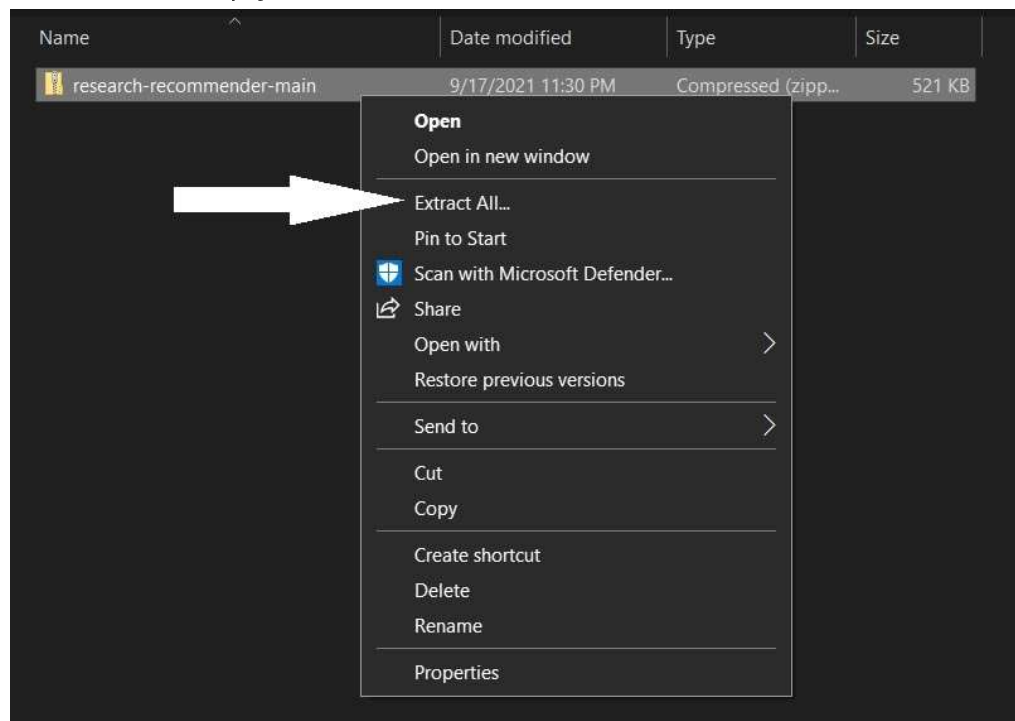
1. Download the submission file from feels or you can get it from github. Instructions to download from github are given below.
 - 1.1. Go to <https://github.com/buddhiheshan/research-recommender>
 - 1.2. Click on the Code button



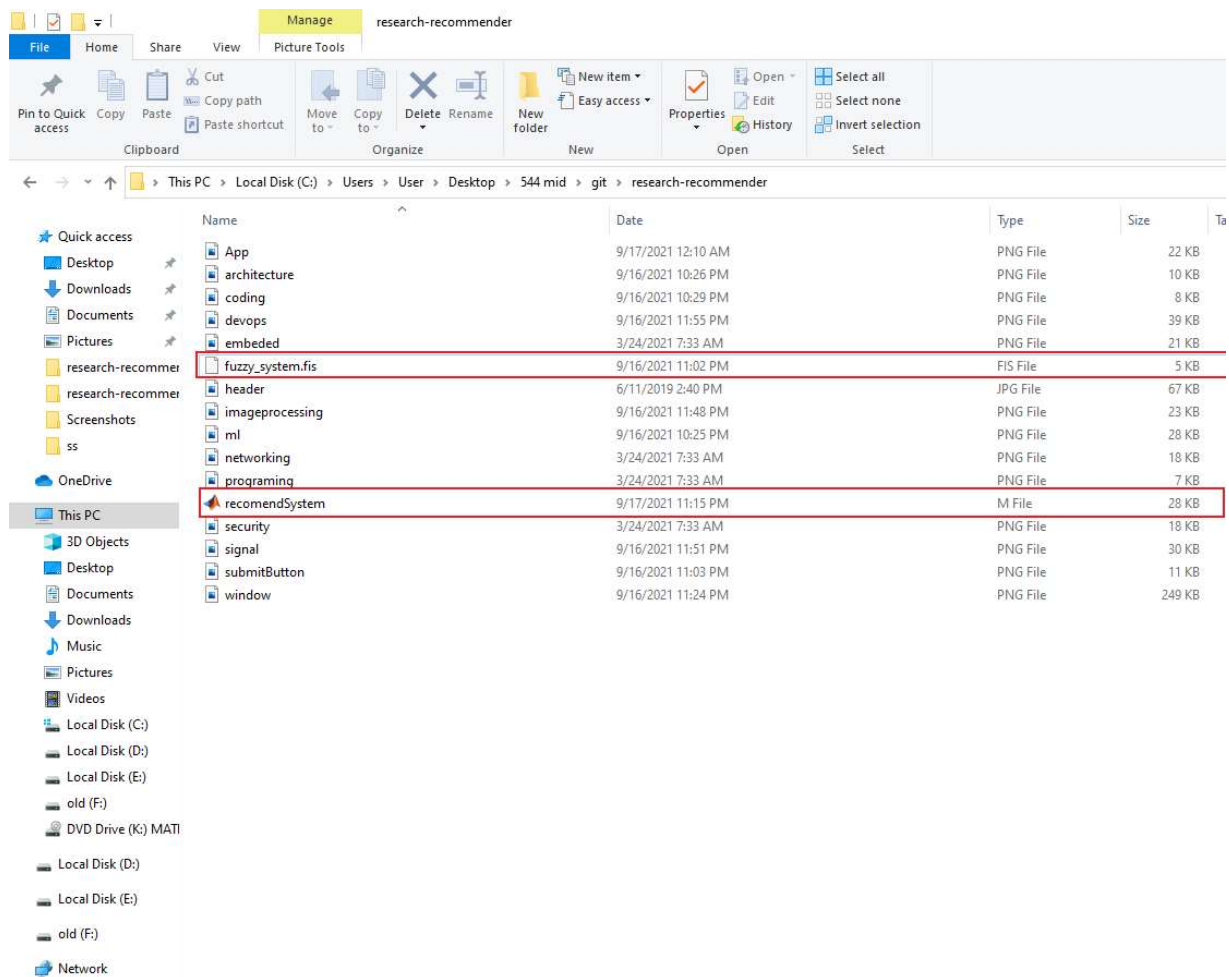
- 1.3. Select the Download Zip option from the dropdown menu and download the repository as a zip file.



2. Extract files to an empty folder

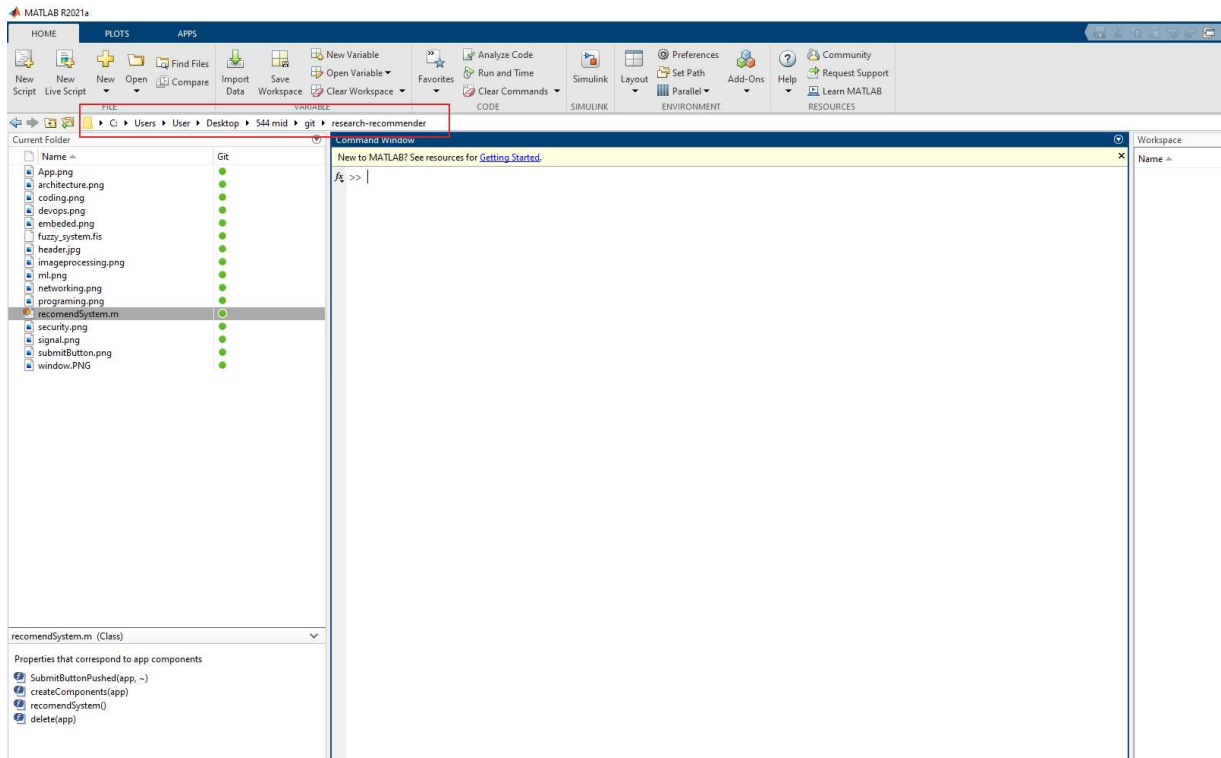


3. Open the extracted folder

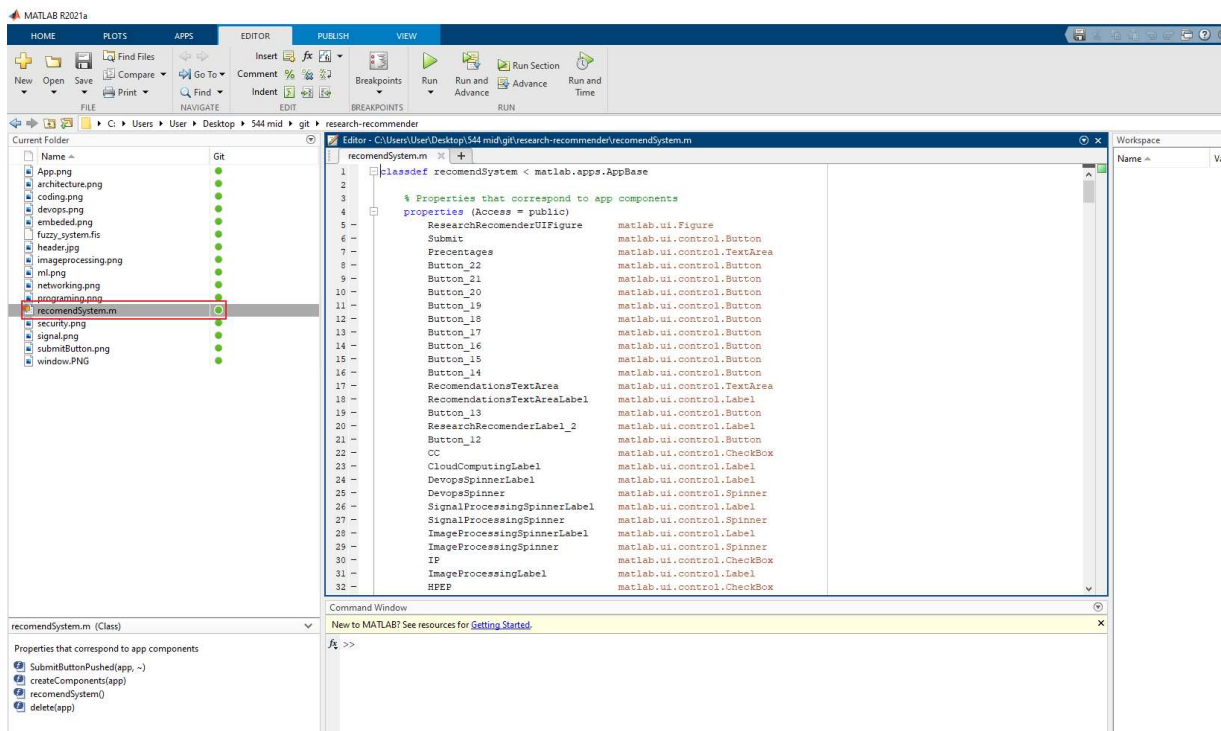


Make sure you have all the files in the directory are there including the 2 highlighted files.

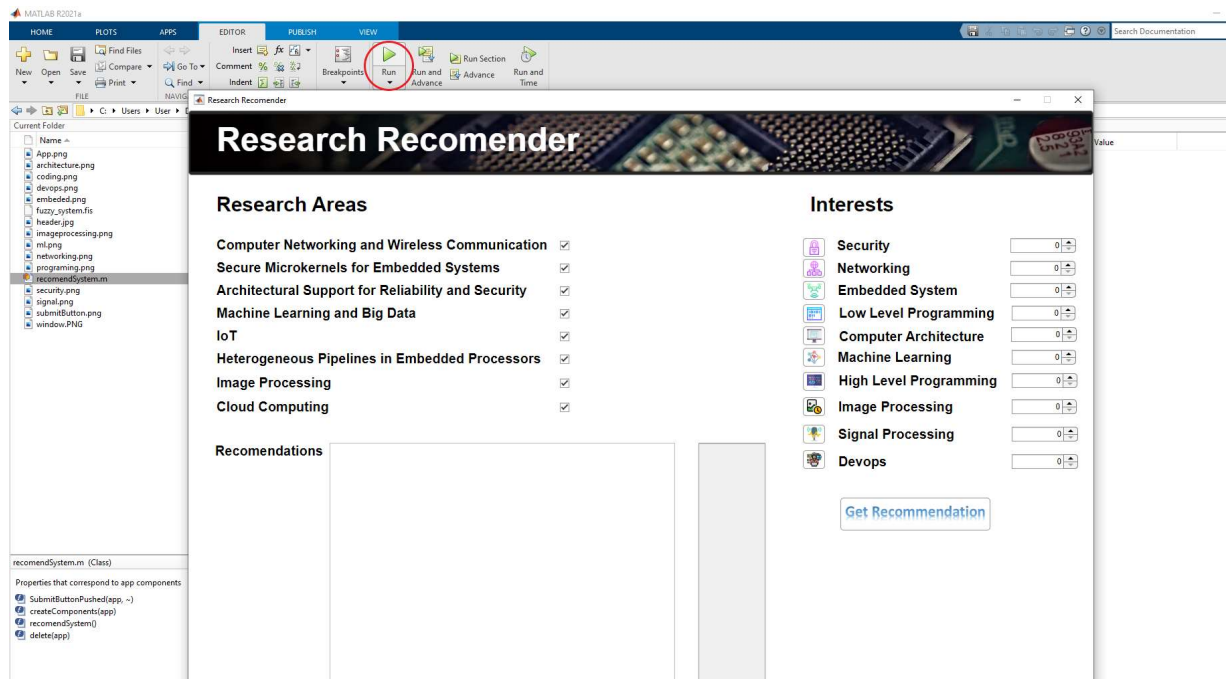
4. Open MATLAB
5. Open the directory you extracted the downloaded file inside MATLAB.



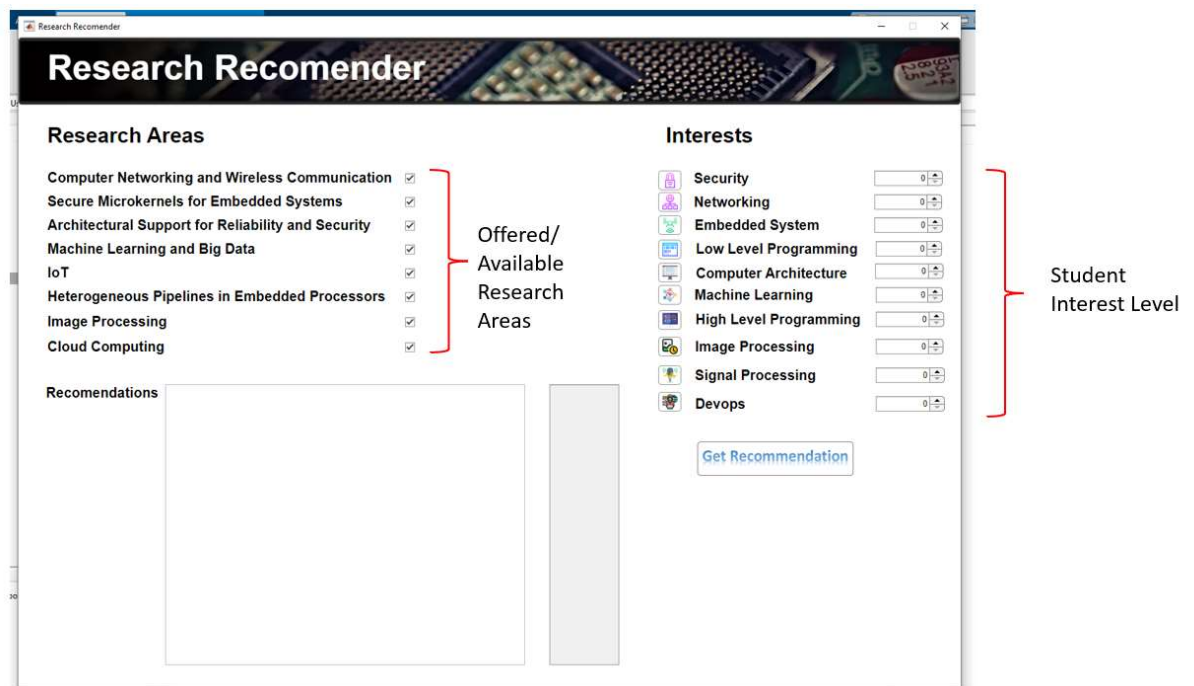
6. Open recomendSystem.m file inside the matlab.



7. Click on the **Run** button. This will open the GUI for our application



8. Select the available research areas and Interest Levels. By default all the Research Areas are available.
Interest Levels have a range of 0-5, 0 being the lowest level.



9. Then click the Get Recommendation button to get your recommendation percentages.

The screenshot shows the 'Research Recommender' application window. It features a header with the title 'Research Recomender'. Below the header, there are two main sections: 'Research Areas' and 'Interests'. The 'Research Areas' section lists seven categories, each with a checkbox. The 'Interests' section lists ten categories, each with a numeric input field. A 'Get Recommendation' button is located at the bottom right of the 'Interests' section. Below the 'Research Areas' section, there is a 'Recommendations' table showing the recommended research topics and their corresponding percentages. A red arrow points to the 'Get Recommendation' button with the text 'Click Here'. Another red arrow points to the 'Recommendation Percentages' column of the table with the text 'Recommendation Percentages'. A third red arrow points to the 'Recommendations' table with the text 'Recommended Research Topics From Available Research Areas'.

Research Areas	Interests
Computer Networking and Wireless Communication <input checked="" type="checkbox"/>	Security <input type="text" value="5"/>
Secure Microkernels for Embedded Systems <input checked="" type="checkbox"/>	Networking <input type="text" value="4"/>
Architectural Support for Reliability and Security <input checked="" type="checkbox"/>	Embedded System <input type="text" value="1"/>
Machine Learning and Big Data <input checked="" type="checkbox"/>	Low Level Programming <input type="text" value="2"/>
IoT <input checked="" type="checkbox"/>	Computer Architecture <input type="text" value="3"/>
Heterogeneous Pipelines in Embedded Processors <input checked="" type="checkbox"/>	Machine Learning <input type="text" value="1"/>
Image Processing <input checked="" type="checkbox"/>	High Level Programming <input type="text" value="3"/>
Cloud Computing <input checked="" type="checkbox"/>	Image Processing <input type="text" value="5"/>
	Signal Processing <input type="text" value="2"/>
	Devops <input type="text" value="1"/>

Recommendations	Recommendation Percentages
Computer Networking and Wireless Communication	91.00%
Secure microkernels for embedded systems	50.00%
Architectural support for Reliability and Security	50.00%
Machine Learning and Big Data	28.00%
IoT	50.00%
Heterogeneous Pipelines in Embedded Processors	28.00%
Image Processing	50.00%
Cloud Computing	50.00%