router provides, and range value depends on the waves transmission environment(e.g. walls prevent the penetration of waves), also the speed of network depends on distance to router, while the speed of wired network is constant for all devices in it.

Wi-Fi technology develops very quickly. In 1997 available speed of WLAN was 1-2 Mb/s, and now in the last IEE 802.11 standard WLAN can reach the speed of 6.77 Gb/s. That is the speed increased more than in 3000 times. Therefore Wi-Fi is still perspective, powerful technology and the best of its kind.

Scientific supervisor: Denisenko N.G.,
Senior Lecturer

UDC 004.056.5 (043.2)

Naidin V.O.
National Aviation University, Kyiv

MACHINE LEARNING SERVICES VIA REST API TECHNOLOGY

Machine learning is the field of computer science that gives a computer the ability to learn without being programmed. It is employed in a great variety of calculating tasks where designing and programming difficult algorithms is practically impossible. As an example, we can consider applications that contain spam filtering, detection of intruders or malicious insiders working towards a data breach, optical character recognition, search engines and computer vision. Machine learning can be used to learn and establish baseline behavioral profiles for different entities and find meaningful anomalies.

Within the field of data analytics, machine learning is a technology used to devise heavy models and algorithms that lend themselves to prediction; in commercial use, it is known as predictive analytics. Such analytical models allow researchers, data scientists, engineers, and analysts to produce reliable, repeatable decisions and results and uncover "hidden problems" via learning from historical relationships and trends in the data. Today there are a lot of services using different technologies for various tasks. The majority of such services are based on REST API.

As a rule, such services offer pre-trained models. Models are trained by the companies and, afterwards, these services are shared with Android developers for usage (they are not free). There is no necessity to have any machine learning knowledge or skills in order to use these models; it's just the connection REST API.

Moreover, among well known and successful companies developing and offering similar services on the market are the following: the Microsoft Cognitive Services, HP Haven On Demand, the Google Cloud Machine Learning APIs and

IBM Watson. So how to get started in? Among these companies they provide free trials with a certain period of time (usually a month). IBM Watson gives a month free usage, while other companies give a small number of free transactions every month. A typical process is that users go to their console or a platform, sign up in an account, get an API key, include the key in Android application, and then developer downloads SDK or includes the dependency in the the build.gradle files if there is an SDK available. If it does not help, the programmer makes the REST API connection, so he has to rewrite a source code himself to handle the REST API call.

Using the REST API Call we usually put an image, then send text, audio or video stream as a string by means of the HTTP call to some REST API endpoints, whether it's vision, language, speech or text, and then the developer gets back a response that can be used in Android application.

For instance, it might be an image of a person's face. The user will send it over to a special API, the result comes back, giving corners of users face detected, which can be used to paint a bounding box on the image and the results go back. It can be some emotions, such as happiness or anxiety; all of these responses will go back, and the user puts them in Android application.

Finally, developers should consider when they make calls doing things asynchronously, if they need to make many calls using not one API. Unlike Google Play Services, for example, the vision API gives programmers the detector master. They have the ability to use the face detection, text recognition or the bar code scanner. In this situation, they have to write their own REST API call, so developers need to handle it themselves.

Scientific supervisor: Hurska O.O.,
Senior Lecturer

Nikoliuk A.I., Avramenko D.I.
National Aviation University, Kyiv

THE MAIN DIRECTIONS OF INTEGRATION PROCESSES IN THE WORLD ECONOMY

Integration processes have some importance to analyze the state's participation in the international division of labor. Broadly speaking international economic integration are determined by the relationship, and by the process. Integration in the first sense can be interpreted as a lack of any form of discrimination of foreign partners in each of the national economies. As the integration process appears to erasing distinctions between economic actors – representatives of different countries.