

University of Tlemcen, in partnership with IBM is delighted to give access to PAUWES students to :



Learn the Skills of the Future

Explore emerging technologies, build innovative solutions, learn new skills and find a job

- **Learn**
Learn the skills of the future with our courses, labs and access to IBM Cloud Lite Account
- **Earn Badges**
Share a verified proof of your achievement by the recognized, respected IBM Digital Badges visible on your LinkedIn profile
- **Innovate**
Build your own solutions using IBM Cloud services (Free Lite Account)
- **Find Jobs**
Set up your profile and search for jobs relevant to your skills

Level : EXPLORER

I'm new to emerging technologies

- I want to know how Cloud, AI, and Data Science & Analytics are changing the world
- I want to know what is Internet of Things (IoT) and Blockchain
- I want to explore Cybersecurity and how it can protect different organizations

Empower yourself with digital skills on the emerging technologies through the seven main categories below :

- **CODING**
From smart phones, video games, to aircrafts, all devices and softwares are powered by code. Create your own program by building blocks of instructions that tell machines what to do.
- **CLOUD**
Accelerate innovation and bring concepts to life. Cloud can empower you to embrace change and propel progress.
- **ARTIFICIAL INTELLIGENCE (AI)**
With AI accelerate research and discovery, transform the way you work, and recommend with confidence.
- **INTERNET OF THINGS (IOT)**
A “thing” is any object with embedded electronics that can transfer data over a network — without any human interaction. See how IoT is reinventing the way we interact with the physical world.
- **BLOCKCHAIN**
What if we could track and authenticate a product or a transaction at each stage of their journey? Accelerate innovation and bring your concepts to life.
- **DATA SCIENCE AND ANALYTICS**
Discover patterns in data and go beyond knowing what has happened to anticipating what is likely to happen next.
- **CYBERSECURITY**
What does it take to build a healthy security environment? Evolve your defenses with security that understands, reasons and learns.

Level : INNOVATOR

I know the basics of emerging technologies and I want to build innovative solutions

- I want a source of inspiration for my next idea
- I want to think like designers
- I want to build an application

Spark your ideas into life with this unique collection of the worlds’ best inventions and tools.

GET INSPIRED

Browse through existing market apps, and seek ideas to create your own.

Browse our inspirations by category and you will find some of the coolest ideas we have found on the web.

- **Intelligent Chatbots**
In the past 50 years the chatbots have evolved from simple programs that repeat user’s words like ELIZA to smart cognitive solutions like Watson Conversation, Siri and Alexa. Today chatbots are present everywhere, you can shop online, manage your calendar or even plan a vacation.

As cognitive technologies get more advanced the more sophisticated the chatbots become. Explore the possible applications in this sections!

- **Artificial Intelligence**

For millennia, humans have pondered the idea of building intelligent machines, now we are on the cusp of augmenting our lives in extraordinary ways with AI. With AI Today we can envision and develop next-generation systems that work side-by side with humans, accelerating our ability to create, learn, make decisions and think. At IBM we architect the future AI with Watson, the world's first and most-advanced AI platform. Whether exploring new technical capabilities, collaborating on ethical practices or applying Watson technology to cancer research, financial decision-making, oil exploration or educational toys, IBM is shaping the future of AI.

- **Internet of Things**

Internet of Things (IoT) is a network of interconnected devices that gather and analyze data to create smart solutions that change the way we live. From smart homes to automated factories, IoT is becoming prevalent in every aspect of our lives. Inventors and businessmen have been creating innovative solutions to problems for generations. From the lightbulb to email, we have been solving our issues as they come. As our lives and problems increase in complexity, so do our solutions. The introduction of IoT in everyday life marks an exciting time in human history. We have achieved goals that we never dreamt were possible.

- **For Younger Adults**

There is mounting pressure today to educate students to higher levels of engagement and fulfillment of potential. Because each child has a unique way of learning, IBM Watson is bringing education into the cognitive era, transforming the learning experience through personalization helping the next generation learn more efficiently.

- **Mobile Apps**

Mobile applications have enhanced the human condition, Today we communicate with friends and family faster than we ever did before, we can also shop, track, search, play and learn, anywhere anytime, and we can fit thousands of apps in the palm of our hand. Lets see some examples of the best mobile applications out there.

DESIGN

Now that you have your idea, let's design it together.

In this section you will get familiar with the design process so you can transform your idea into a prototype.

Complete the 18 modules in the course to earn your Design Achievement.

- **Design Thinking for Beginners**

Whether you're re-envisioning the customer experience for a multinational bank or just planning your product's next release, IBM Design Thinking keeps you focused on what matters to users as you lead your team from ideas to outcomes.

- **Design Stories**

Design Thinking is a proven way of coming to better solutions in less time. IBM has re-envisioned this process, creating a framework for the speed and scale of the modern enterprise. Design Stories is your single source for how IBMers are using IBM Design Thinking.

BUILD

Getting Started with AI

- **Build your own Chatbot**

Chatbots are conversational robots that simulate conversation, and can interact with both users and services. Through Cloud and Cognitive Computing, you can open up your chatbot to countless creative applications.

Imagine if you could build a chatbot that understands how someone is feeling. Your chatbot could play music or make suggestions to help them feel happier.

What you will learn:

- Design Thinking
- Art of Conversation
- Create your own Chatbot
- Science of Tones and Emotions

- **Find valuable insights with IBM Watson**

Using the various IBM Watson services, you can leverage several cognitive algorithms to obtain useful information out of raw data, which in-turn can help solve countless problems.

Here you will learn how to use a variety of IBM Watson services, such as, Watson Discovery, Watson Assistant (formerly Conversation), Watson Tone Analyzer and Personality Insights to extract meaningful information out of large unstructured datasets. You will be able to extract pattern, trends, and analyze the tone and emotion from the data set.

What you will learn:

- Discovery
- Watson Assistant (formerly Conversation)
- Tone Analyzer
- Personality Insights

- **Discover IBM Watson Services**

AI applications are powered by unique capabilities that allows them to learn and adapt to take better decisions.

Here you can learn how to access IBM Watson and create different types of applications using Artificial Intelligence APIs, and give your apps characteristics before only available to humans.

What you will learn:

- Speech To Text
- Text To Speech
- Sentiment
- Personality

Getting Started with IoT

- **Build your first IoT Application: Node-RED**

Internet of Things (IoT) is a network of “things”. A “thing” is any object with embedded electronics that can transfer data over a network – without any human interaction. IoT can make life easier and reinvent the way we interact with the physical world.

This course will provide you with hands-on experience and teach how to use Node-RED, a browser-based flow editor that allows you to connect together simulated and real-life devices, services and APIs.

What you will learn:

- Internet of Things (IoT)
- Node-RED
- Which Watson Services can be utilized in IoT
- How to integrate a chatbot in IoT
- How to interact with an IoT application using a smartphone

- **Build a Notification System for your IoT Application**

Wearable devices, environmental sensors, machinery in factories, components of vehicles and devices in homes and buildings are all examples of IoT devices. They can all be connected to deliver insights by talking to each other and sending notifications to the user.

This course will teach you how to send an SMS alert notification from a temperature sensor simulator (IoT device) to your mobile phone using a Twilio API.

What you will learn:

- Role of sensors in IoT
- How to use a sensor simulator
- How to setup and use notification APIs (like Twilio)
- How to connect physical devices using Node-RED flow editor

- **Integrate Watson Assistant and Telegram using Node-RED**

Chatbots can also be integrated with IoT applications. An example of controlling IoT devices is to send them commands using an instant messaging application such as Telegram on your phone.

This course will teach you how to integrate Watson Assistant with Telegram using Node-RED flow editor.

What you will learn:

- How to setup a Watson Assistant chatbot
- Connect your Telegram bot to Watson Assistant using Node-RED

Getting Started with Blockchain

- **Build your Car Auction Application**

Blockchain is a shared ledger technology that allows any participant in the network to see the one system of record. It is an emerging technology that can radically improve banking, supply chain etc. and can create new opportunities for innovation.

Learn about Blockchain through practice! Create an application that imitates a car auction.

What you will learn:

- Blockchain
- Blockchain for Business
- Hyperledger Composer
- Blockchain application development

- **Build your Voting Application**

Blockchain applications extend far beyond business. It can be used in any system that requires transactions, be that business or politics. Blockchain-based voting has added value in terms of fairness and security of the votes in comparison with Internet-based voting.

Utilize blockchain to create a voting application. It will not only make process of voting efficient but will also ensure that no vote is tampered with.

What you will learn:

- Blockchain
- Hyperledger Composer
- Blockchain application development
- Transaction logic

- **Getting Started with Data Science & Analytics**

Predict Employee Turnover using IBM Watson Studio

Data Science is the discipline of acquiring data, finding insights, and sharing discoveries in all this data. The amount of data is always increasing along with its complexity. Data Scientists systemize it and make sense of it.

Get a taste of Data Science process by predicting employee turnover in a company. You will be provided with a data set and use IBM Watson Studio tool.

What you will learn:

- Data Science
- IBM Watson Studio
- Data Refinery
- Machine Learning

- **Identify potential repeat customers for your business**

Data is everywhere in our world from academia and software development to business and industry. Before it can be out to good use, it must be properly refined by a Data Scientist.

Learn how to use IBM Watson Studio and IBM Watson Knowledge Catalog to clean the data and derive new information from the data set.

What you will learn:

- Data Science
- IBM Watson Studio
- IBM Watson Knowledge Catalog
- Data Refinery
- Analyzing Data

Level : NEW COLLAR

Boost your skills and get the job you want.

LEARNING PATHS

- Visual Designer
- Artificial Intelligence Analyst
- Web Application Developer
- Cloud Application Developer

VISUAL DESIGNER

list of courses :

- **Design Thinking**

ARTIFICIAL INTELLIGENCE ANALYST

list of courses :

- **Artificial Intelligence**
- **IBM Watson**
- **Natural Language Processing**
- **Chatbots**
- **Computer Vision**

WEB APPLICATION DEVELOPER

list of courses :

- **Web Development**
- **HTML**
- **CSS**
- **Javascript**

- Java
- API
- Web Services
- GIT
- NodeJS
- Web Security
- Express Web Framework

CLOUD APPLICATION DEVELOPER

list of courses :

- Cloud Computing
- Cloud Foundry
- DevOps
- Cloud Database

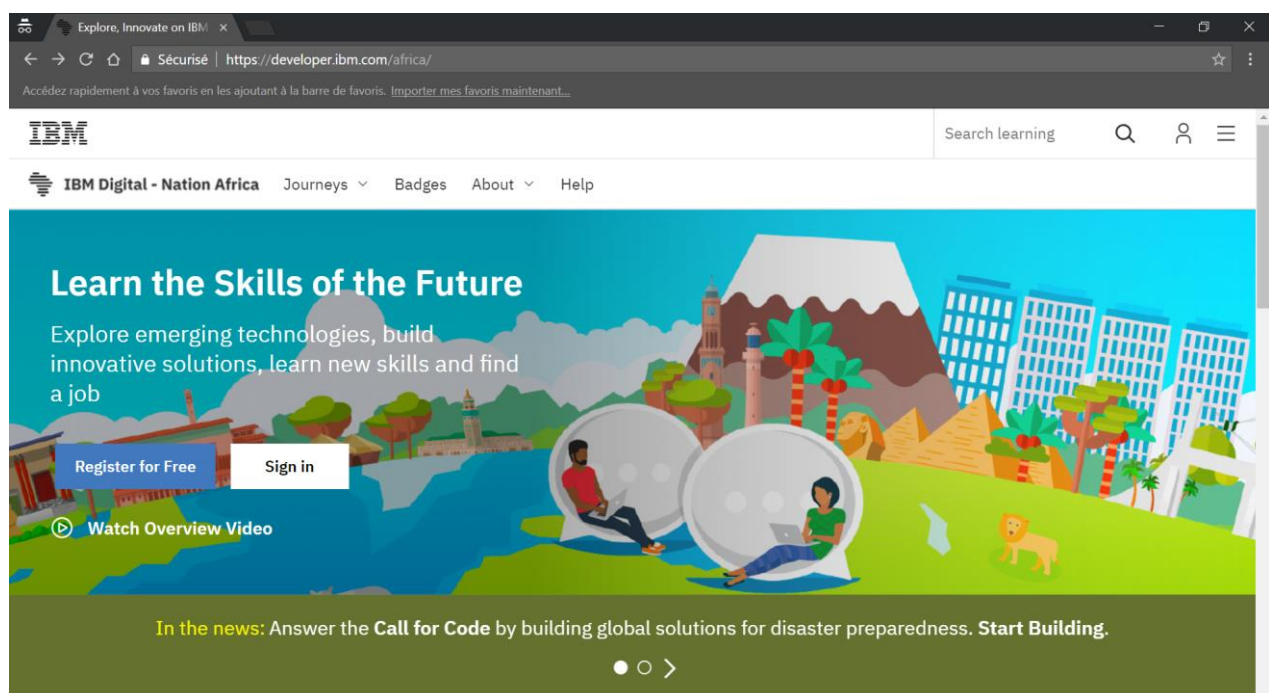
AI INTERVIEW

Fill your profile with Watson, it will analyze your skills, and find positions in the IT job market that best fit your profile.

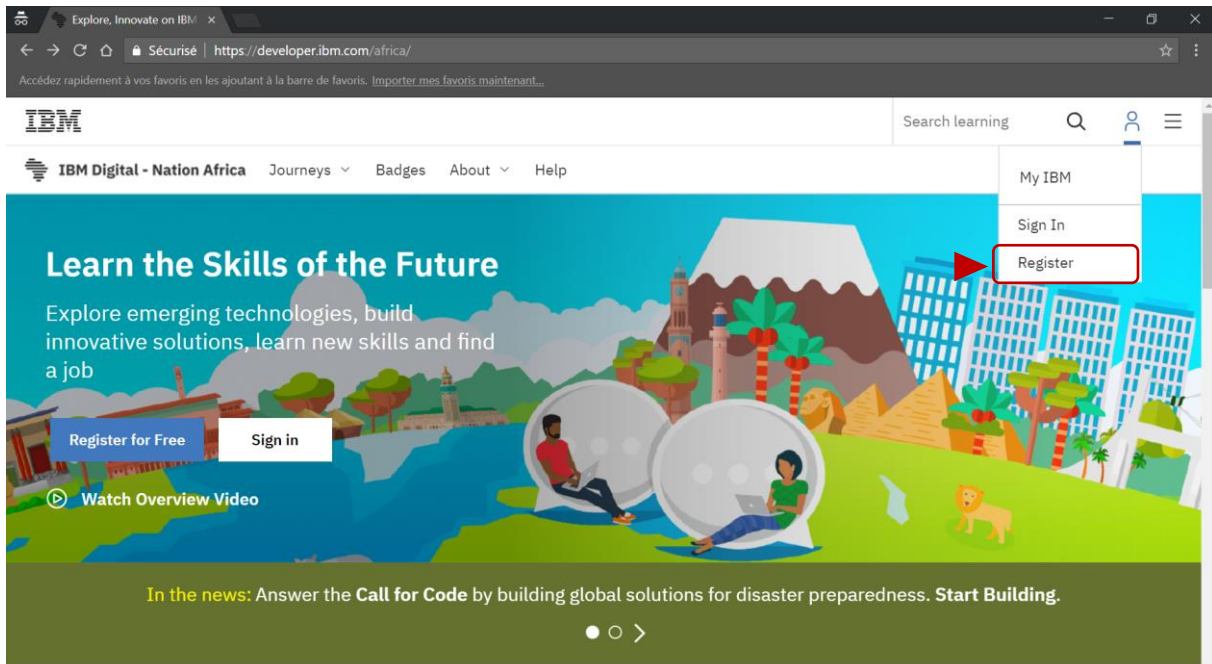
Registration: HOW TO

How to register to IBM Digital – Nation Africa :

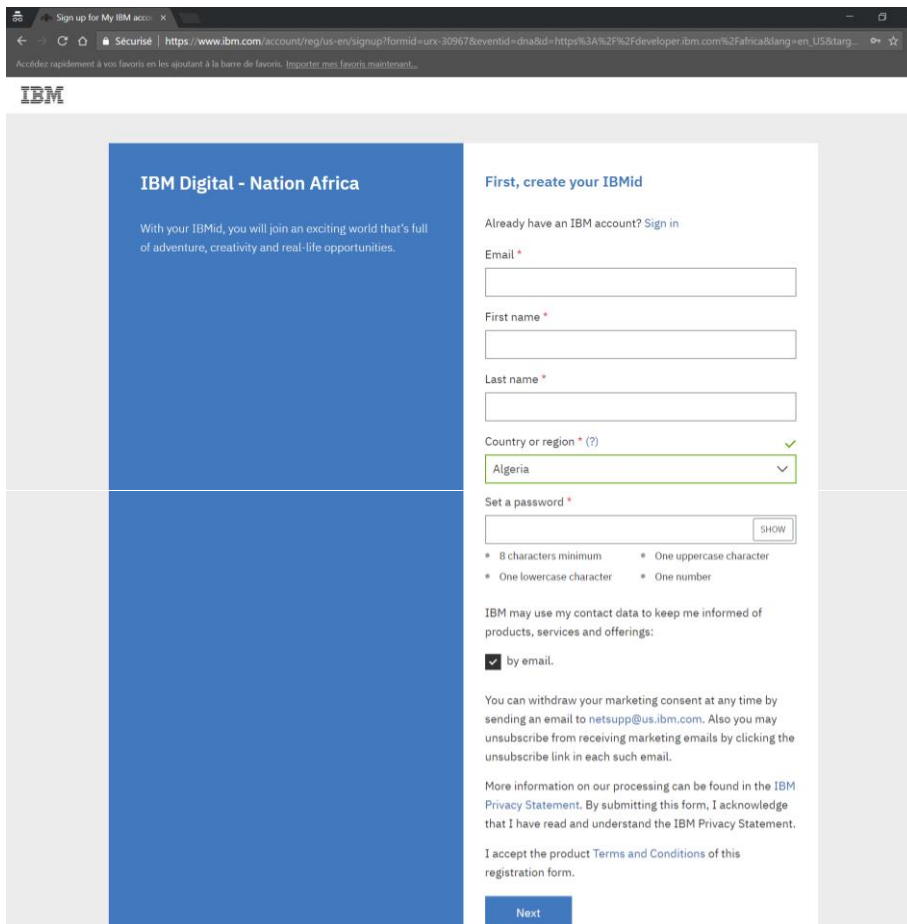
On your favorite browser go to : <https://developer.ibm.com/africa/>



Click on register :



Fill the online form :



The screenshot shows the IBM registration form. The form is titled "First, create your IBMid". It includes fields for "Email", "First name", "Last name", and "Country or region" (set to "Algeria"). There is a "Set a password" field with a "SHOW" button. Below the form, there are checkboxes for "IBM may use my contact data to keep me informed of products, services and offerings:" and "by email." (checked). At the bottom, there is a "Next" button.



Be sure to enter the right information, you will need to make confirmation by email so be sure to enter your right email.

After confirmation, you will have full access to the IBM Digital – Nation Africa platform !

For any question send an email to the PAUWES Career Service Officer : f_hadjamara@yahoo.fr

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PAUWES