OrangeJobs

2021-2022 Edition

MODIG

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ls IT* for yo

* Information Technology

Orange Cyberdefense

Mia fighting trolls

MODIG

#EthicalHacker #Pentester #Gamer #Fight #Rolemodel #International

At only 24, Mia already has an exceptional career. She first got into IT through video games and then became interested in how computers work. She loves all types of games and even named her dog Zelda, after the legendary character. At home, in Oslo, she presented a TV show about the world of gaming at the age of 17.

Mia didn't actually plan to work in IT; initially she was destined for a career in sports. **Two-times champion in taekwondo** for the Norwegian national team, she studied sports science.

As a teenager, Mia was the victim of a privacy violation and cyberbullying. It was a shock. "I had a very painful time", she confides, but she has a strong character. The police didn't take her case seriously. So she began to learn little "tricks" to find the trail of her online abuser. Her friends and classmates asked her for help. She learned more and more on her own.



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* Computer Emergency Response Team. ** Monitoring centers for a network infrastructure or an information system.

In 2017, Nora Mork, the biggest star in handball, also a victim of cyberstalking, mentioned her name in various media.

Mia became famous overnight. Faced with the influx of requests, she decided to professionalize her fight and branched off into IT security. She created her business to teach children and teens to protect themselves on the Internet, and fight against child pornography. She has spoken out in the media, made a TedX* talk, and has written a children's book on the same subject, whichwas a bestseller for several months in Norway. At the end of her studies, she asked a Facebook group for advice:

I want to help people: what would be the best job?

She received many suggestions and eventually chose Orange Cyberdefense as an ethical and pentesting hacker. "I chose Orange over many companies because the cybersecurity branch had just been created, there were two hackers when I arrived, a year later there were nine of us. Everything had to be created, you have to fight and I like to fight. :-) Orange totally supports my cause, allows me to participate in TV shows, frees up the time I need to travel. Not to mention that I work with four of my best friends here. It's a dream job." Ethical hacking has become a real passion: "I'm doing something useful and important and I'm learning every day. Orange offers me highly advanced certifications. I have been working since I was 15; I had simple jobs to earn money and I encourage others to follow their dreams, even their wildest ones!".

Mia acknowledges her role as a role model for young women who want to work in IT.

"I would tell women to be confident and speak out. When they are in a room, they should make sure they have been seen and heard by everyone there. Never 'stay in your place.' Have you seen your dream job but you think you're not good enough? Apply anyway."



* https://www.tedxarendal.com/speaker/mia-landsem/

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True or false?

A word, a definition Which of the following definitions are correct?

1 /	Social	engine	eering	is the	art o	of exp	loiting
the	e humar	ı flaw ir	n cybe	rsecuri	ity.		

True False

2 / A red team exercise is when firefighters are called in to put out a fire in a data center.

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True	False
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3 / A data scientist gives meaning to existing data.

True	False
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4 / Neural networks are the backbone of deep learning algorithms.

True	F	alse

5 / Corporate Social Responsibility (CSR) is the contribution of companies to ecology.

.....

True False



5 / True, CSH touches on broader subjects than ecology, i.e. promoting good working conditions, promoting adversity, local employment or even fighting against corruption. This is referred to as corporate sustainable development. 4 / True. Deep learning is a subdomain neural networks, themselves a of machinesu lebadronminagin, i tself a subAI. It is the dedportmh aoifn n oetu ral networks that distinguishes a single neural deep lenaertawinogr ka lfgroormit ham : it must more than threein clude levels.

1 / True. Social engineering is used by cybercriminals to manipulate a person in order to obtain information (such as a password) and to break into a system without technical hacking.

A rease. It is an exercise in which a red ream rests
rescentify of a system by trying to hack into it.
He mission of the opposing blue team is to protect
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3 / False. This is the definition of a data analyst, capable of extracting raw data from existing data (big data) in order to draw conclusions and develop strategic and decision-making tools with very high added value. Through their knowledge of statistical and mathematical predictive models, the data and mathematical predictive models, the data scientist works on new ways to capture and scientist works on new ways to capture and solven and walve the models.



Future operations

Exists since February 2012 Number of members: 82 Nationalities represented: 13 Prospective subjects under construction: 5G slicing, edge computing, full automation, full SDN, NoOps, zero touch operations, security by operation...



Security

Exists since January 2011 Number of members: 118 Prospective subjects under construction: AI / MLapplied security, AI security, cyber rating, DevSecOps, full cloud & edge computing security, future security operations center, identity management & federation, industry 4.0 security, IoT & smart cities security, post-quantum cryptography



Networks of the future

Exists since July 2010 Number of members: 82 Prospective subjects under construction: 6G, collaborative networks, drone networking, intention-based networking, quantum internet



Big data and artificial intelligence

Exists since January 2019 Number of members: 81 Prospective subjects under construction: ambient AI, quantum computing for AI, edge AI



Solutions for content services

Exists since January 2011 Number of members: 64 Prospective subjects under construction: cloud gaming, On-demand Rise, sensors, super aggregation, video AI Interpolation



Energy and environment

Exists since March 2013 Number of members: 60 Prospective subjects under construction: adaptation to climate change, optimization of energy sources, IT for Green, self-minimalism and sobriety

Eight communities at the heart of cutting -edge technology

Expertise is made to be shared, recognized and valued. This is the whole point of the Orange Experts communities, which value expert profiles, allow you to contribute to future facing subjects, give you access to strategic information and offer you visibility. By integrating the community in your field, you are making a winning bet: access to cutting-edge training and specific information, additional visibility, participation in high-stake projects, individual support in your career... What else?



and communication

Exists since September 2014 Number of members: 67 Prospective subjects under construction: 6G, metaverse, hologram, quantum communication, decentralized identity, biometrics, cashless society, smart contracts, Internet of everything, digital twins



Exists since January 2014 Number of members: 103 Prospective subjects under construction: human enhancement technologies, hybrid cloud, low-code, optical computer, self-healing architecture, serverless...

Developing a new media in four months

Neo.tv is the pure media player launched by Bernard de la Villardière to compete with Brut. Morgane's team of digital and data management at Orange really went for it ...

We had to innovate the website and imagine smart devs.

The loading time was the big challenge. We have worked on it for three weeks, and now we are ahead of our competitors.

Morgane led the entire project record time: four days to respond to the call for tenders, four months to develop the website.

Norman, in charge of the front-end website development, has integrated a part of the website, which helped to develop his skills.



So I learned to use a new tool (Next.js) as well as a new language (TypeScript).

I had a real technical challenge because I am a mobile developer and had never made a website.

What I liked was that the project was new, dynamic and flexible. The customer trusted us and we could give free rein to our ideas.



Taieb working at the back end, developed web services to integrate the number of Facebook views on the site.

Laurent and François-Alexandre are senior full stack devs, and provided support for the junior devs.



Youssef gave us a hand on the front end.



Yannick is an Amazon web services expert, he configured the modules on the streaming and loading part.





The Orange worlds

will be someone who, in their head, from their little workshop, finds the most effective system to get the most out of 5G."

Christian, 5G deployment team manager

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5G

Discover a high-tech universe

Cloud

"There's always a new challenge to meet the needs of very different customers, and therefore to keep

Etienne, director of Orange Cloud for Business France

Cybersecurity Mr. X, pentester (aka person who tracks security loopholes)

Healthcare

"We have plenty of discussions with healthcare professionals - everything comes from them, their needs.' Icham, healthcare innovation director



"In the jobs market, there is significant and growing demand for people who understand this market. ;-)" Luc, marketing director

Future of work Orange is inventing the ways of working of the future.

Mobile financial services

"More than 60 million Orange Money customers can perform instant, reliable and secure financial transactions in 17 countries from their mobile!" Dimitri, Orange Bank distribution director

Software Defined Network (SDN)

"We have virtualized data centers with the cloud, and with SDN we are going to virtualize the network." Yann, services architect

Consulting

"It's very stimulating, a wide range of tasks and people." Marie-Cécile, customer relations consultant

Start-up

1,000 start-ups supported since 2013. 17 Orange Fab accelerators across 4 continents.

AI

"Beyond technological prowess, I ask myself what we are going to be able to provide to humans, and ultimately the responsibility we have about what we are going to do." Catherine, UX designer

Network

"There's a significant amount of technological innovation. It moves fast. We are implementing innovation resources to always stay one step ahead." Yves. network strateov director



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Development "We make significant contributions to Open Source projects used worldwide." Cédric, software job training manager

Content

"It's a magical world seen from the outside, and I get to go behind the scenes."

Sophie, international video acquisition manager

Data "We haven't even scratched the surface of AI and big data technologies." Maroua, data scientist

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Customer relation

"Customer relations are evolving, we are in full transformation. Now is the time to make it happen." Pierre, customer relations

manager

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Submarine cables

"Orange Marine operates 6 cable-laying vessels and 1 survey vessel from its marine bases or foreign ports." Bénédicte, Orange Marine

So where do you fit in?



Guillaume was on an internship to become a data scientist in the field of cloud computing. He was hired after this experience.

Jean-Laurent was his internship supervisor for six months.

Together, they discuss what the apprentice/ tutor relationship gives them and the sense of usefulness they get from their mission.

Guillaume follows the Orange-Polytechnique course: a 105-hour certified training course in data science.

Tell us about your background.

Guillaume - I have a master's degree in Mathematical Engineering. I did a lot of theory in data science, what I was looking for at Orange was something more practical.

What did you like most about his profile?

Jean-Laurent - His journey was unique. Focused on mathematics, without development. The challenge was for him to adapt and build his development skills.

What are you doing now?

Guillaume - After my internship, a data science job came up. I stayed with the Astro team. We do predictive maintenance to detect anomaly patterns in customer journeys at Orange sites. We anticipate attacks and fraud, and supervise our IT infrastructure.

In what areas have you seen him grow since the start of his internship?

Jean-Laurent - He added a string to his bow.

He came from data science, a field in which he gained prominence as well as in the cloud. Now he also has development, so his profile has been considerably enriched. **Guillaume** - At Orange, I followed a long training course as a data scientist with the École Polytechnique, I am writing my thesis at the moment. And I am in the process of getting certified in cloud data engineering. Not all companies offer as many training courses of such a high level!

What did you learn from each other?

Jean-Laurent trusted me and gave me a chance, even though I did not quite match the profile they were looking for. This risk-taking is a lesson.

It was confirmation for me, as a manager, that taking a bet on this kind of profile enriches the team.

How do you feel useful today in your job?

Guillaume - Thanks to my work, attacks are avoided, crises are anticipated. We provide very concrete help to our customers.

Technology for healthcare

Using full band sound to listen to a heartbeat over the phone, one of the lab's research projects.

Hello, I am Hervé, co-director of the Telecom4Health laboratory. I'd like to tell you about this new framework for innovation for multidisciplinary teams.

Telecom4Health (T4H) is a joint research laboratory between Orange and the University of Grenoble-Alpes oriented by 4P medicine (predictive, preventive, personalized and participatory). Together, we design digital health technology for well-being and aging well. The lab is not a physical place, it is joint work. How can we apply our know-how and our technological assets to the health sector in a relevant way? **That's the whole challenge!**

Our roadmap focuses on four areas for 2021:

1. Blockchain

Qualify blockchain's contribution to the management of consent for clinical trials

For example, when a laboratory conducts a clinical study, a consent form must be signed and even today, this is done on paper. We want to use our blockchain expertise to track proof of clinical consent, which will be useful in different situations (care, clinical studies, medical research), including over time: without loss or alteration.

2. Full band sound

Validate the benefits of full band sound for health

We will soon be able to transmit very high-quality sounds via mobile telephone lines: from the lowest to the highest that a human ear can hear (20 to 20,000 Hz). This could allow remote listening, for example, of heart beats (especially below 50 Hz) with a digital stethoscope. Is there any benefit in developing medical monitoring tools or remote diagnostic assistance? That is the purpose of our research.

Joining forces between the tech - with our telecom component -, the academics and the world of health, is fascinating. We meet some extraordinary people.

3. Data analysis

Remote monitoring of vulnerable people

From the data used for the itemized bill, we established statistical correlations between the way you use your phone and changes in a person's physical, mental and social health.

For example, for an elderly person, seeing that ringing times increase can be a warning. This may mean that the person cannot hear as well, or that they move more slowly, or no longer want to pick up the phone. The evaluation of the relevance of this remote monitoring is the subject of experiments with volunteers.

4. Reasoned Al

Diagnostic assistance

Orange has developed the Maxwell platform, initially designed to classify technical documents. However, it has characteristics that set it apart from current practices implementing deep learning (based on neural networks). Maxwell is different, and for the health sector has the dual advantage of using much smaller cohorts than required by deep learning, and providing certain justifications for the result, which is appreciable in boosting confidence for medical decision making.

Continuous learning

So much more to learn

Throughout your journey, you can learn to meet the challenge of technological transformations

- and stay on top. At Orange, training is modular and personalized, so that everyone can follow
- their own development path. It is also accessible to everyone, and in all our countries! The choice is yours:
- your specialty, your pace and your way of learning.

Understanding the essentials

With "Visas for all", curious minds have access to **digital content** to learn the basics in key topics such as diversity, compliance, CSR... Enough to satisfy their thirst for knowledge!

For example :

What impact has artificial intelligence had on my profession as a lawyer? Or how do I integrate an eco-responsible approach into my job as a buyer?

You can also **learn about** new technologies (data, AI, cybersecurity, cloud, 5G, virtualization, etc.), and discover new ways of working such as design thinking and agile mode.





Learn a new job

We have **our own apprentice training center!** In France, to join Orange, our apprentice training center offers on-the-job training with four courses: cybersecurity, data analyst, cloud and customer service.

If you join our Group, the center offers on-the-job training for the same careers to employees interested in changing profession.

Progress

Towards a new profession

Are you looking to turn your career path into a new direction ? The business line schools offer **professional courses providing certificates and diplomas** in more than 20 areas (purchasing, maintenance and repairs, customer service, Al data, cybersecurity, cloud, network, etc.).

Become a manager

Manager: key expertise and the path to development. Orange Campus supports you in your **personal development** and in the management of a team. You are not born a manager, you become one!

For example, thanks to the modules: "Self-awareness" "Catalyst of agility manager" "Manager providing meaning" and "Business developer manager".

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Become an expert

Enhancing your skills, improving your expertise, that's also a way to progress. The **business line schools and Orange Campus** support your development in all areas: data / Al, cybersecurity, network and IS, customer relations, innovation, content and multimedia, etc.



Face-to-face and digital (of course) but also hybrid, on-the-job training, virtual classroom, MOOCs, social learning, mobile learning, immersive learning with VR, etc.

Become a Super Expert

You can take the most advanced certifications in your field (for example: Cisco, Microsoft, etc.).

With the **Orange Expert** communities, exchange best practices and continue to progress **among peers** when you are already an advanced expert in your field. You learn with the best since Orange cooperates with private and public **partners** at the forefront of high-tech fields:

Private: Google, Microsoft;

Public: Polytechnique, Simplon, CNAM, UIMM, GEN; **Training:** Coursera, Learn Assembly, Global Knowledge, Headflex, La fresque du climat ... and many more.



2024 Olympics, technical preparation for a flawless event

Hello, I am Olivier, technical director of Orange Events.



Follow me behind the scenes of organizing the games.

2024 Olympics

Orange will provide all the telecom and network solutions for the 90 Olympic and Paralympic venues: connectivity, mobile services, connecting equipment such as timing and large screens, transporting images to be broadcast to four billion users. We are the first operator to provide so many services - in Tokyo, there were four operators for the same number of services.

As the athletes prepare themselves physically, our teams are also undertaking major technical preparations so that the performance is flawless.

The team

For this, we will rely on more than 1,000 managers, technicians, and experts who will experience an absolutely incredible technological and human adventure.

The Orange teams will therefore be at the center of the event, both to design the services and implement and run them during the 17 days of the Olympic Games and the 12 days of the Paralympic Games.

Preparation

This is the longest phase since it requires five years of technical design, visits to Olympic venues, implementation of services, attendance at international events to test them and train the teams.

The fiber network infrastructure will have to be built on all sites, which represents a total distance of 400,000 km of fiber (a little more than the distance between the Earth and the Moon!), 6,000 switches, and 7,000 Wi-Fi terminals.

Orange is contributing towards the neutral carbon strategy decided by the organizing committee: for example, our architecture has been optimized, in particular by reusing as much existing cabling as possible, and by refurbishing the switches and cables.

The other major issue is cybersecurity, for which we provide advanced services.

From April to June 2024, the Orange teams will install the services at the Olympic venues.

Warm-up

The Orange teams will be put to the test during major events such as the Tour de France and Roland-Garros and, in 2023, around twenty "test events" for the Olympic Games.

Then 100 days and 50 days before the Games take place two dry-runs will be held allowing the teams to warm up and integrate very rigorous operational procedures.

Compétition

Let's take the example of the 100-meters final at 11 am. At 7:30 am: arrival of the teams and verification of the 60 checkpoints. 8:00 am: team briefing. From 8:30 am to 12 noon: technicians in the press gallery to welcome and help the journalists, and carry our any necessary repairs. **1:30 pm:** arrival of the other team which takes over for the afternoon competitions.

It is demanding, you have to work independently and remain composed, be ultra-responsive and listen to users.

Stretching

All this work is not just for the Olympics, it accelerates the development of new services and solutions. For the Olympics, we are developing cutting-edge services that we then market. For example, walkie-talkies will be replaced by a "push-to-talk" mobile app that will be used by 15,000 users.

Want to be part of the team ?

Come learn and develop your skills by participating in a unique experience!

Follow news on orange.jobs

24 hours... with a pentester



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Zelda.jpg

09:15 AM



Our first meeting starts with a major player in the **health sector** who handles medical information and social security numbers ... basically, **sensitive data.**

Their new website is live and they would like us to do some **penetration testing.**

10:00 AM

As soon as the meeting is over, I write a quick **report.**

I plan everything in detail, in particular the **hacking tools** I'll be using. I send my proposal to the client. It will take about two weeks to look at how the website is built, analyze any flaws and then test them.

11:00 AM

I suggest going to lunch, but it's too early.

I start writing a **security report** for a client. I have just spent almost six months working on their **vulnerability management.** That gave us time to get to know each other well. It will take me about two days to write it up, and then I'll go and present it to them.



Focused on my report, time flies by! Now I'm really hungry ... At last! We go to lunch.

1:45 PM



I go to a client with two members of my team to present our report to them and answer their questions. For this mission, the big concern was **social engineering**, which is good, because it's what I **specialize** in.

4:00 PM

Back at the office, I go back to testing an **API***. I have to keep my documentation up to date! It's tedious but it will save me so much time when writing my report and for future missions.

6:00 PM

I go home and immediately take Zelda out for a good walk. One question haunts me, and I can't help but do some research online ... **pentesting is a passion!**



"It's fun, challenging, everyday day is different, and it's for a good cause!"

*Application Programming Interface

Is IT for you?

Play and find out which IT job suits you best.





Play in French on isitforyour.fr Soon in English !



When to apply?

As Beyoncé (almost) says, "We all have our purpose, we all have our strengths. So, apply on orange.jobs!"

121	Feb	Mar	Apt	May	Jun	Jul	AUS	Ger	oct	NOV	Dec
Internsl	nip										
Work-st	udy pro	gram									
Post-do	ctoral										
Thesis											
Volunte	ering										
Fixed-te	erm/pern	nanent c	ontract	s							
Pro Cor	ntract O	ange Gr	aduate								
Orange	Gradua	te Progr	am								

CQPT* (in France)

* Certificat de Qualification Professionnelle des Télécommunications. To find out more, https://orange.jobs/site/fr-professionnalisation/index.htm.

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