Table of Contents

Cursos y Training

cursos, coursera, mooc, training}, }, ##, Gaia-X, Governance, Framework, Gaia-X, Association, covers, three, , , for, a, common, digital, governance, based, on, European, values., , enables, interoperable, &, portable, (Cross-), Sector, data-sets, and, services., Data, , A, mean, to, perform, data, exchange, and, anchor, data, contract, negotiation, results, into, the, infrastructure., Each, pillar, will, have, one, or, more, artefacts, in, the, form, of, Specifications,, Software, and, Label., For, further, details, please, browse, here., //docs.gaia-x.eu/framework/, //docs.gaia-x.eu/framework/?tab=software, Gaia-X, Lab, Compliance, Service., //gitlab.com/gaia-x/lab/compliance/gx-compliance/-/tree/v1.0.0?ref type=tags, Gaia-X, Lab, Registry., //gitlab.com/gaia-x/lab/compliance/gx-registry/-/tree/v1.0.0?ref type=tags, GXDCH, (Gaia-X, Digital, Clearing, House), –, the, one-stop, place, to, go, and, get, verified, against, the, Gaia-X, rules, to, obtain, compliance, in, an, automated, way., The, GXDCH, is, the, necessary, element, to, operationalize, Gaia-X, in, the, market., The, Gaia-X, Framework, describes, functional, specifications,, technical, requirements,, and, SW, assets, necessary, to, be, Gaia-X, compliant., The, GXDCH, are, a, network, of, execution, nodes, for, the, compliance, components, that, we, have, developed., This, safeguards, the, distributed,, decentralised, ways, of, running, the, Gaia-X, compliance,, not, operated, centrally, by, the, Association,, and, where, anybody, can, benefit, from, the, open,, transparent,, and, secure, federated, digital, ecosystem, –, thus, making, the, Gaia-X, mission, a, reality., //gaia-x.eu/gxdch/, //docs.gaia-x.eu/framework/?tab=clearing-house, The, Gaia-X, Digital, Clearing, House, (GXDGH), is, the, mechanism, through, which, Gaia-X, is, operationalised, in, the, market., The, Gaia-X, Framework, contains, functional, specifications,, technical, requirements,, and, the, software, to, use, to, become, Gaia-X, compliant, and/or, Gaia-X, compatible., The, GXDCH, contains, a, subset, of, the, software, components, in, the, Gaia-X, , the, mandatory, components, and, some, of, the, optional, ones., //docs.gaia-x.eu/framework/?tab=software, //gitlab.com/gaia-x/lab/gxdch, //gitlab.com/gaia-x/lab, //gitlab.com/gaia-x/lab/compliance, Gaia-X, -, 1, -, Compliance, Service., Compliance, service, enforcing, rules, defined, in, the, TrustFramework, -, Architecture, Document/Compliance, Document., Gaia-X, -, 2, -, Registry., Source, of, truth, for, the, Compliance, engine,, validating, certificate, are, conforming, to, rules,, providing, shapes,, schemas, and, trusted, sources., Gaia-X, -, 3, -, Notary, -, registrationNumber., Notarization, API, to, get, a, Legal, Registration, Number, used, to, get, compliance, Gaia-X, -, 4, -, IPFS, Pinning, Service., This, project, helps, pushing, and, pining, on, IPFS, the, registry, static, files,, shapes,, context,, ontology,, revoked, issuers, and, trusted, clearing, houses., Gaia-X, -, 5, -, Trust, Anchor, Service., Service, building,, signing, and, pushing, on, IPFS, the, Gaia-X, AISBL, trusted, anchors, list, //gitlab.com/gaia-x/lab/libraries, ###, Libraries, to, generate, and, validate, DID,, sign, Gaia-X, credentials, using, JWS, 2020,, and, a, ETSI, 119, 612, serializer, for, Gaia-X's, trusted, anchors, Gaia-X, did-verifier., A, JavaScript, library, to, verify, DIDs, and, their, verification, methods, against, a, registry, Gaia-X, did-web-generator., Javascript, library, allowing, to, generate, , DID.json, file, through, public, key, , and, domain, name, Gaia-X, json-web-signature-2020., A, lightweight, JsonWebSignature2020, signing, and, verification, Typescript, library, by, Gaia-X, AISBL, Gaia-X, jsonld-http-client., Simple, HTTP, client, replacement, for, @digitalbazaar/http-client, using, axios, and, without, relying, on, ky, nor, wasm, Gaia-x, Trusted, List, Serializer., ###, Eclipse, GAIA-X, and, DataSpaces, //gitlab.eclipse.org/eclipse/xfsc/, ##, Post-Quantum, Cryptography, (PQC), -, Security, Due, to, recent, development, in, quantum, computing,, the, invention, of, a, large, quantum, computer, is, no, longer, a, distant, future., Quantum, computing, severely, threatens, modern, cryptography,, as, the, hard, mathematical, problems, beneath, classic, public-key, cryptosystems, can, be, solved, easily, by, a, sufficiently, large, quantum, computer., As, such,, researchers, have, proposed, PQC, based, on, problems, that, even, quantum, computers, cannot, efficiently, solve., Generally,, post-quantum, encryption, and, signatures, can, be, hard, to, compute., This, could, potentially, be, a, problem, for, IoT,, which, usually, consist, lightweight, devices, with, limited, computational, power., There, are, existing, literature, on, the,

performance, for, PQC, in, resource-constrained, devices, to, understand, the, severeness, of, this, problem., It, exists, recent, proposals, to, optimize, PQC, algorithms, for, resource-constrained, devices., Online, videos, and, courses, about, PQC., //www.classcentral.com/subject/post-quantum-cryptography?lang=english, Post-Quantum, Cryptography, for, Internet, of, , A, Survey, on, Performance, and, Optimization., //arxiv.org/abs/2401.17538, PQ-TLS-Test, is, a, project, dedicated, to, testing, post-quantum, TLS, (PQ-TLS), in, PQ-hybrid, schemes, on, both, general-purpose, computer, systems, and, embedded, systems., The, project, aims, to, provide, comprehensive, insights, into, the, performance, of, post-quantum, cryptography, (PQC), by, evaluating, various, handshake, modes,, client, scales,, and, network, topologies., //github.com/open-quantum-safe/liboqs, //github.com/open-quantum-safe, //github.com/PQTLS/MLT, //github.com/PQCA, //github.com/topics/post-quantum-cryptography, WolfSSL, integration, into, libcoap, for, experimenting, with, Post-Quantum, Cryptography.., //github.com/qursa-uc3m/libcoap-wolfssl, ##, Claude, -, ChatGPT, for, programming, Claude, se, basa, en, sonet3.5, y, en, claude.ai,, hay, una, interfaz, similar, a, chatgpt,, pero, para, que, sea, ya, mucho, más, útil, hay, que, ir, directamente, a, la, empresa, anthropic, y, solicitar, una, api, key, y, saltarse, la, interfaz, web, grafica, En, //console.anthropic.com/, ya, se, puede, uno, registrar, y, crear, keys, y, con, la, apikey, y, metiendole, saldo, ya, tenemos, para, configurar, la, extensión, de, vscode, y, hacer, preguntas, desde, allí, la, extensión, sale, en, los, vídeos, que, es, claude-dev, pero, ahora, ha, cmbiado, el, nombre, a, cline, Lo, que, hay, que, buscar, en, youtube, es, claude.ai en vscode, //www.youtube.com/watch?v=E yTAau--sE, //www.youtube.com/watch?v=CoHSHOylTlc, //www.youtube.com/watch?v=ic9905SMPzk, claude, va, perfecto, a, día, de, hoy, pero, lo, mismo, en, 1, mes, sale, otro, mejor, ##, EU, research, project, management, Aquí, tienes, un, curso, gratuito, de, 1, hora, que, explica, aspectos, claves, a, entender, sobre, la, participación,, gestión, y, justificación, de, los, proyectos, I+D, EU., A, continuación,, podéis, encontrar, el, enlace, al, curso, y, también, están, los, vídeos, subidos, a, Youtube., Recomiendo, sobre, todo,, el, capítulo, 2, y, el, capítulo, 4., Free, Tutorial, -, Horizon, , from, proposal, stage, to, project, management, |, Udemy, //www.udemy.com/course/horizon-europe-project-management/, -, Introduction, to, the, MOOC,, given, by, Laura, Gómez, (ICCRAM-UBU)., -, Chapter, , Horizon, Europe, Framework,, by, Raquel, Moreno, (AXIA, Innovation)., -, Chapter, , Project, management, models,, by, Laura, Gómez, (ICCRAM-UBU)., //youtu.be/aYSPUf0Yoak?feature=shared, -, *Chapter, , Successful, proposal, writing,, by, Sonia, Martel, (ICCRAM-UBU)*., //www.youtube.com/watch?v=LBhAR5VM-us, -, Chapter, , EU, Project, Management,, by, Laura, Gómez, (ICCRAM-UBU)., //youtu.be/LA7Zf74jKqE?feature=shared, -, Chapter, , Exploitation, and, IPR, management,, by, Raquel, Moreno, (AXIA, Innovation), -, Chapter, , Communication, and, dissemination, management,, by, Beatriz, Lapuente, (ICCRAM-UBU), Además,, se, comparte, una, guía, que, explica, la, participación, en, proyectos, I+D, EU,, no, hace, falta, leerlo, completamente, aunque, sobre, todo, tiene, un, glosario, al, final, donde, podéis, ver, los, principales, términos, y, conceptos, claves, que, se, usan, en, los, proyectos, I+D, EU., Y, consultarlo, cada, vez, que, escuches, o, leas, un, término, que, no, conocéis., PM²,, Project, management, methodology, -, Publications, Office, of, the, EU, (europa.eu), //op.europa.eu/en/publication-detail/-/publication/ac3e118a-cb6e-11e8-9424-01aa75ed71a1, A, nivel, más, experto,, hay, un, manual, online, que, explica, en, detalle, cómo, usar, el, portal, EU, para, solicitar,, gestionar,, justificar, los, proyectos, y, explica, las, principales, acciones, que, se, realizan, durante, todo, el, tiempo, de, vida, de, un, proyecto, EU., //ec.europa.eu/research/participants/docs/h2020-funding-guide/index en.htm, image 1 .png?800|

C Programming

- King, “C Programming A Modern Approach”
  - Especialmente interesantes los capítulos 10 y 15 sobre compilación de programas por módulos (varios archivos .c).

- Hook, “Write portable code: an introduction to developing software for multiple platforms.”, 2005, [Online]. Available: http://books.google.com/books?hl=en&lr=&id=4VOKcEAPPO0C&oi=fnd&pg=PR15&dq=Write+Portable+Code:+A+Introduction+to+Developing+Software+for+Multiple+Platforms&ots=WE_oO8Cv2X&sig=TWzivvIW8jA98rvXXPzPbnLI-28.

Networking

- Use of Scapy for interactive network packet manipulation.

MOOCs

Coursera, **EdX** y **Udemy**

- Si te da muchos problemas la plataforma web de COURSERA para los cursos gratuitos, puedes buscar cursos similares en la web EdX, Udemy.

Massive Open Online Course (MOOC) is an online course aimed at unlimited participation and open access via the Web. In addition to traditional course materials, such as filmed lectures, readings, and problem sets, many MOOCs provide interactive courses with user forums or social media discussions to support community interactions among students, professors, and teaching assistants (TAs), as well as immediate feedback to quick quizzes and assignments.

Among the most popular platforms are Coursera and EDX.

Git MOOCs

IMPORTANT course with some guides about git submodules. GIT: Free Git Tutorial - Git: Become an Expert in Git & GitHub in 4 Hours. Udemy https://www.udemy.com/course/git-expert-4-hours/ Good practices with Git repository. https://wiki.odins.es/research/good_practices/home

- **NOTE** both the command line and a graphical interface tool are covered. It is **strongly** advised to learn how to use the **command line** and skip the graphical interface tool sections.

Alternativas en Español - https://www.coursera.org/learn/git-espanol - https://www.udemy.com/course/git-desde-cero/

IoT MOOCs

Cursos gratuitos sobre introducción a IoT en udemy o edx.org. 1. CurtinX: Introduction to the Internet of Things (IoT) | edX. https://www.edx.org/learn/iot-internet-of-things/curtin-university-introduction-to-the-internet-of-things-iot 2. Free Internet of Things (IoT) Tutorial - Introduction to Internet of Things and Cloud | Udemy. https://www.udemy.com/course/a4iot-intro-iot-cloud/

Instalation of ESP32 programming environment

Follow the steps indicated in this wiki page to start programming the ESP32 device and solve the principal errors obtained during the configuration.

Other reference material

- Simplilearn. Machine Learning Full Course. URL: https://www.youtube.com/watch?v=9f-GarcDY58
- Paper: TinyML-Enabled Frugal Smart Objects.

Raspberry PI

- RaspberryPI and Node-Red: Free Raspberry Pi Tutorial - Internet de las cosas con Raspberry Pi - Curso inicial | Udemy https://www.udemy.com/course/internet-de-las-cosas-con-raspberry-pi-curso-inicial/

Redes IoT

- 6lowpan, Zigbee, Zwave: Free Wireless Networking Tutorial - Wireless Technologies for IoT | Udemy https://www.udemy.com/course/wireless-technologies-for-iot/
- Lorawan: Free Internet Of Things Tutorial - The Things Academy: Understand LoRaWAN ® Fundamentals | Udemy https://www.udemy.com/course/lorawan-fundamentals/

Python

- Python: Free Python Tutorial - Introduction To Python Programming | Udemy https://www.udemy.com/course/pythonforbeginnersintro/

Python REST JSON

- Python-REST-JSON: Accediendo a los Datos de la Web con Python: Web Scrapping y APIs | edX https://www.edx.org/es/course/accediendo-a-los-datos-de-la-web-con-python-web-scrapping-y-apis?index=spanish_product&queryID=3ef8535e647a29c4841f11a267f5c20b&position=1
- REST API with Python and Flask. https://www.udemy.com/course/flask-rest-api-with-swagger-documentation/

Javascript, Web Developing

Por favor, continua con tu formación en remoto en desarrollo Web con Javascript, framework Vue.js y demás herramientas que te paso a continuación.

El siguiente curso es bastante interesante sobre python y javascript, tiene muchos más temas que puedes saltarte sobre Django, html, css, etc.

CS50's Web Programming with Python and JavaScript. 100h | edX
https://www.edx.org/es/course/cs50s-web-programming-with-python-and-javascript?index=spanish_product&queryID=6d83f85162bd76e90d488b4b5721e4f0&position=1

JavaScript, jQuery, and JSON | Coursera https://es.coursera.org/learn/javascript-jquery-json

Tutorial | Vue.js (vuejs.org)
https://urldefense.com/v3/__https://vuejs.org/tutorial/*step-1_;Iw!!D9dNQwwGXtA!SnjU9HG4OjqfHgqc07d7O321F6ueqqiFp4kijbjFXY2eaSDKwTKLKHBWE7LmXODsIAcVXAQwZvE8PmOXTZE6w$

Además, 2 herramientas (Bootstrap, Semantic-ui) son para la parte visual para los elementos y el estilo de los formularios, sólo para tema de apariencia sin funcionalidad ninguna.

https://semantic-ui.com/

https://getbootstrap.com/docs/5.3/

Para la consulta de formatos de tiempo en js: https://momentjs.com/

Para recordar las reglas del CSS: https://htmlcheatsheet.com/css/ Video para saber utilizar vuetify: https://www.google.com/search?q=como+a%C3%B1adir+una+columna+de+botones+a+vuetify+2&rlz=1C1UEAD_esES980ES980&oq=como+a%C3%B1adir+una+columna+de+botones+a+vuetify+2&aqs=chrome..69i57j0i546.20031j0j15&sourceid=chrome&ie=UTF-8#fpstate=ive&vld=cid:6b8ef41f,vid:pMSp0L7AuN8

Herramienta de testeo web automatizada. Playwright. Fast and reliable end-to-end testing for modern web apps.

https://playwright.dev/

https://playwright.dev/docs/intro

https://playwright.dev/docs/test-configuration

ChatBot - LLM - NLP - procesamiento de lenguaje natural.

Te envío algunas propuestas de cursos y guías sobre procesamiento de lenguaje natural que creo que pueden ser interesantes. Como hablamos ayer, siempre puedes buscar otros por tu cuenta, sobre todo conforme vayas sumergiéndote en los desarrollos para entender mejor algunos conceptos o descubrir nuevas técnicas.

Estos dos son más genéricos, para una primera introducción:
https://www.udemy.com/course/introduction-to-natural-language-processing-nlp-llm-ai-gate-moyyn/
https://www.udemy.com/course/natural-language-processing-python-nlp/

Este de aquí se centra en las técnicas de zero-shot, few-shot y chain of thought:
https://developers.google.com/machine-learning/resources/prompt-eng?hl=es-419
Este es para que veas el funcionamiento de Hugging Face, aunque ya me dijiste que lo conocías:
https://www.coursera.org/projects/open-source-models-with-hugging-face?action=enroll
Y este último es sobre algunas métricas de evaluación:
https://unite.ai/es/evaluaci%C3%B3n-de-modelos-de-lenguaje-grandes-una-gu%C3%ADa-t%C3%A9cnica/

AI/ML para Python.

- Free Machine Learning Tutorial - The Top 5 Machine Learning Libraries in Python | Udemy. https://www.udemy.com/course/the-top-5-machine-learning-libraries-in-python/
- Free NumPy Tutorial - Learn NumPy Fundamentals (Python Library for Data Science) | Udemy. https://www.udemy.com/course/python-numpy-fundamentals/
- Free Pandas Tutorial - Pandas with Python | Udemy. https://www.udemy.com/course/pandas-with-python/

AI/ML for Plant Disease Prediction with CNN

Plant Disease Prediction with CNN https://www.youtube.com/watch?v=L-Tqf1w5d0I

Plant Leaf Disease Detection Using CNN | Python https://www.youtube.com/watch?v=zcq5aw9t-Ds

Plant Disease Detection Using Image Processing and Machine Learning
https://arxiv.org/pdf/2106.10698

Building a Vision Transformer Model from Scratch with PyTorch
https://www.youtube.com/watch?v=7o1jpvapaT0

AgriCLIP: Adapting CLIP for Agriculture and Livestock via Domain-Specialized Cross-Model Alignment
https://arxiv.org/abs/2410.01407 https://github.com/umair1221/AgriCLIP/tree/main

Intro to Deep Learning with PyTorch https://www.udacity.com/course/deep-learning-pytorch--ud188

Convolutional Neural Networks
https://www.mygreatlearning.com/academy/learn-for-free/courses/convolutional-neural-networks

Aprendizaje automático con Python
https://www.coursera.org/learn/machine-learning-with-python#modules

Basics of Microservices https://www.udemy.com/course/evolution-of-microservices/

Cursos sobre Python, Yolov8 y Redes Neuronales para procesamiento de imágenes de cámaras.

Para ello antes te tienes que familiarizar con el procesamiento de imágenes, redes convolucionales y en concreto con YOLOv8 que es el modelo que estamos usando para este tipo de desarrollos. Te paso en este mismo correo enlaces de interés.
https://youtube.com/playlist?list=PL-Ogd76BhmcB9OjPucsnc2-piEE96jJDQ&si=t8tKupH_L5tpInOC

https://docs.ultralytics.com/es

https://youtube.com/playlist?list=PLZCA39VpuaZZ1cjH4vEIdXIb0dCpZs3Y5&si=XuxMWNMllNeAlwOe

https://www.diarioabierto.es/556879/la-inteligencia-artificial-reconoce-al-mosquito-tigre-en-una-fotografia

- Enlace al vídeo Tratamiento de imágenes de cultivos:

https://www.youtube.com/watch?v=O8qdsIKoNAo
- Enlace al vídeo ¿Cómo funcionan las redes neuronales?: https://www.youtube.com/watch?v=IQMoglp-fBk

Cursos sobre Python y Earth Data Science para procesamiento de imágenes satelitales.

- Earth Data Science Courses & Textbooks | Earth Data Science - Earth Lab https://www.earthdatascience.org/courses/
- Calculate Vegetation Indices in Python | Earth Data Science - Earth Lab. Learn how to calculate vegetation indices from multispectral remote sensing data in Python. https://www.earthdatascience.org/courses/use-data-open-source-python/multispectral-remote-sensing/vegetation-indices-in-python/
- What is Lidar Data | Earth Data Science - Earth Lab. Lidar is an active remote sensing technique that measures vegetation height. https://www.earthdatascience.org/courses/earth-analytics/lidar-raster-data-r/lidar-intro/
- Enlace al curso 'Introduction to Remote Sensing in Python (Jupyter)': https://youtu.be/gi4UdFsayoM
- Enlace al curso 'Introduction to Remote Sensing in Python. (jupyter)': https://hub.gke2.mybinder.org/user/yohman-workshop-remote-sensingpptgj542/notebooks/Remote%20Sensing%20Camp.ipynb
- Enlace al curso Remote Sensing Image Acquisition, Analysis and Applications: https://www.coursera.org/learn/remote-sensing/
- Enlace al curso 'Multispectral Remote Sensing Data in Python': https://www.earthdatascience.org/courses/use-data-open-source-python/multispectralremote-sensing/
- Enlace al curso Convolution Neural Networks for Image Processing - Using Keras: https://towardsdatascience.com/convolution-neural-network-for-image-processing-usingkeras-dc3429056306
- Enlace al curso Neural Networks for Image classification: Tensorflow and Keras: https://www.modeldifferently.com/en/2021/10/image_classification/

TinyML MOOCs

- Course: IBM Corporation. Machine Learning with Python: A Practical Introduction. URL: https://www.edx.org/es/course/machine-learning-with-python-a-practical-introduct.
- Course: UCI. Introduction to the Internet of Things and Embedded Systems. URL: https://www.coursera.org/learn/iot.

Estudio de EstadoDelArte en Github y en Google-Scholar sobre trabajos previos y desarrollos previos del problema a solventar sobre la plaga de plantación de arroz.

https://github.com/search?q=rice+insect+detection
https://scholar.google.com/scholar?hl=es&as_sdt=0%2C5&as_ylo=2017&q=rice+insect+detection+cnn&btnG=

- Hacer un listado con los desarrollos y trabajos previos, indicando referencias, lenguajes de

programación, repositorios de código.
- Seleccionar los más interesantes con Manolo para instalarlos y testearlos localmente.
- Seleccionar el modelo o red neuronal que queremos mejorar.

Fase 3: Entrenar, avanzar y mejorar el modelo con la combinación de parámetros y herramientas adicionales.

- Entrenar el modelo o red neuronal con las imágenes disponibles en repositorios abiertos o privados.

- Analizar la precisión del modelo o red neuronal para la detección de insectos en las plantaciones de arroz.
- Mejorar la precisión y porcentaje de acierto del modelo para la detección de insectos.

Optimizadores en redes neuronales:
https://velascoluis.medium.com/optimizadores-enredes-neuronales-profundas-un-enfoque-pr%C3%A1ctico-819b39a3eb5

Funciones de activación:
https://jahazielponce.com/funciones-de-activacion-y-comopuedes-crear-la-tuya-usando-python-r-y-tensorflow/

Transformers: https://viso.ai/deep-learning/vision-transformer-vit/

Clasificación de imágenes y Transformers:
https://towardsdatascience.com/usingtransformers-for-computer-vision-6f764c5a078b

Transformers en Keras: https://keras.io/examples/nlp/text_classification_with_transformer/

Capsule Networks: https://blog.paperspace.com/capsule-networks/

Attention Mechanisms:
https://www.analyticsvidhya.com/blog/2019/11/comprehensiveguide-attention-mechanism-deep-learning/

Docker y Kubernetes

- Free Docker Tutorial - Docker Essentials | Udemy - 3h
https://www.udemy.com/course/docker-essentials/
- Introduction to Containers, Kubernetes and OpenShift | edX
https://www.edx.org/es/course/introduction-to-containers-kubernetes-and-openshift?index=spanish_product&queryID=39fcc25aa7d7026587d914ebf7cdfea8&position=3
- Kubernetes: Introduction to Kubernetes | edX
https://www.edx.org/es/course/introduction-to-kubernetes?index=spanish_product&queryID=dd557e6db00e949866fcdae2545e4d42&position=1
- Kubernetes on Edge: Introduction to Kubernetes on Edge with K3s | edX
https://www.edx.org/es/course/introduction-to-kubernetes-on-edge-with-k3s?index=spanish_product&queryID=f243097e387b224f1597971644aa7be4&position=4
- Kubernetes en Hyper-AI (diapositiva 20):
https://transfer.odins.es/z74HOIy9J3/HYPER-AI_GA2_WP5_CERTH.pptx

Blockchain, Hyperledger Fabric.

- Introduction to Hyperledger Blockchain Technologies | edX https://www.edx.org/es/course/introduction-to-hyperledger-blockchain-technologie?index=spanish_product&queryID=ab4107cf98fddb85b0b61d3c89b330cd&position=1
- A Blockchain Platform for the Enterprise — hyperledger-fabricdocs main documentation https://hyperledger-fabric.readthedocs.io/en/release-2.5/

QA software testing for Web, Mobile App, REST APIs

- Become Software Tester - A Complete Learning path to be a QA. Free tutorial. Rating: 4.6 (208 ratings) 5,064 students 1hr 17min of on-demand video. Udemy. https://www.udemy.com/course/become-software-tester/
- Cucumber, Selenium WebDriver & Java - in under 2 Hours! - [New 2023] Free tutorial. Rating: 4.7 (2,127 ratings) 48,748 students 1hr 45min of on-demand video. Udemy https://www.udemy.com/course/cucumber-selenium-java-develop-a-framework-in-25-hours/
- Selenium WebDriver with Python scripting language. Free tutorial. Rating: 4.6. (310 ratings) 14,588 students 1hr 54min of on-demand video. Udemy. https://www.udemy.com/course/selenium-webdriver-with-python-crash-course/
- Cucumber & Java & Selenium automation framework - JASECU. Free tutorial. Rating: 4.8 (45 ratings) 4,098 students 1hr 59min of on-demand video. Udemy. https://www.udemy.com/course/jasecu-ui-api-automation-framewok/
- Selenium Webdriver - How to Do Mouse and Keyboard Actions. Free tutorial. Rating: 4.3. (653 ratings) 3,979 students 1hr 7min of on-demand video. Udemy. https://www.udemy.com/course/selenium-webdriver-how-to-do-mouse-and-keyboard-actions/
- Appium for Mobile Automation Testing. Free tutorial Rating: 3.6 (1,995 ratings) 49,008 students 28hr 51min of on-demand video. Udemy https://www.udemy.com/course/appium-selenium-for-mobile-automation-testing/

Back-End y Front-End

- NODE-RED. Para realizar el backend de comunicaciones Node-RED (nodered.org). https://nodered.org/
- MONGODB. Como base de datos para el backend. MongoDB Documentation https://docs.mongodb.com/
- GRAFANA. - El frontend para visualizar los datos. Grafana: The open observability platform | Grafana Labs https://grafana.com/

Puedes encontrar videos en Youtube y manuales en internet que explican como combinar esas herramientas para crear tu propio backend y frontend.

- Grafana showing MQTT data served by NodeRED - YouTube https://www.youtube.com/watch?v=9nZtiwD8wGc
- MongoDB dashboard for Grafana | Grafana Labs https://grafana.com/grafana/dashboards/2583
- NODE RED | MONGODB CONNECTION USING NODE RED - YouTube https://www.youtube.com/watch?v=zRRQCEov-4Q