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DEPARTMENT OF COMPUTER APPLICATION

INTEGRAL UNIVERSITY
LUCKNOW - INDIA

SUSTAINABLE DEVELOPMENT GOALS

TECH DOSE

JULY 2024

TECHNICAL COMMITTEE

1 Microsoft Reports CrowdStrike IT Outage Impacted 8.5 Million Windows Devices

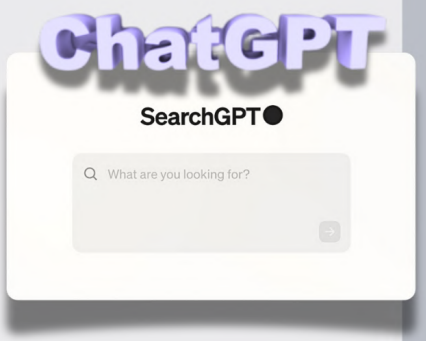
Microsoft

Microsoft estimates that a global IT outage, caused by a corrupted CrowdStrike update, affected 8.5 million Windows devices. This incident, potentially the largest cyber event ever, highlights the need for rigorous quality control in software updates. Cybersecurity experts warn of increased hacking attempts and advise using only official CrowdStrike channels for recovery and information.

https://www.bbc.com/news/articles/cpe3zgznwjno

2 OpenAI Launches SearchGPT; Alphabet's Shares Decline

OpenAI unveiled a prototype search engine, SearchGPT, designed to offer fast, relevant answers and integrate with ChatGPT. This development comes as Alphabet's shares fell over 3%, reflecting concerns that OpenAI might capture market share from Google. The new search tool aims to improve user experience with natural, conversational search methods. OpenAI also recently launched the GPT-4o mini model and hired new executives to strengthen its position in the generative AI market.



https://www.cnbc.com/2024/07/25/openai-announces-a-search-engine-called-searchgpt.html

3 Google's Project Green Light Utilizes AI to Alleviate Traffic Congestion and Cut Emissions

Google's Project Green Light, developed by Google Research, aims to reduce traffic congestion and emissions at city intersections using AI. The project leverages traffic data from Google Maps to model and improve traffic flow, providing recommendations to city traffic engineers. It can reduce stop-and-go traffic by up to 30% and emissions by up to 10%. Operating in over 12 cities globally, including Bengaluru and Seattle, the initiative helps optimize traffic light timing with minimal infrastructure changes, benefiting up to 30 million car rides monthly.

https://www.gadgets360.com/ai/news/google-ai-project-green-light-features-traffic-congestion-reduce-emissions-6228909

4 Microsoft Launches AI-Powered Bing Generative Search, Potentially Challenging Google's AI Summaries

Microsoft has introduced Bing Generative Search, an AI-powered feature that provides a snapshot of information for search queries, similar to Google's AI Overviews. Launched to a limited audience, the feature displays sources and can include images, videos, and tables. It's part of Bing's AI-powered chat answers and aims to deliver relevant search results by processing extensive data sources. Traditional search results are shifted to the right, with the new AI-generated snapshot appearing on the left.

https://www.gadgets360.com/ai/news/microsoft-bing-generative-search-rolled-out-could-rival-google-ai-overviews-6187157

5 Solos AirGo Vision Smart Glasses With GPT-4o and Google Gemini Integration Reportedly Launched

Solos recently unveiled the AirGo Vision smart glasses, marking the first time the Hong Kong-based brand is incorporating AI features with computer vision. The glasses will be integrated with OpenAI's GPT-4o model and are expected to launch later this month. Additionally, they will reportedly support Google Gemini and Anthropic's Claude AI.

https://www.gadgets360.com/ai/news/solos-airgo-vision-smart-glasses-gpt-4o-google-gemini-integration-unveiled-report-6008232

6 Meta Accused by EU of Violating Tech Rules With Its 'Pay or Consent' Advertising Model

EU antitrust regulators charged Meta Platforms with violating key tech regulations due to its new "pay or consent" advertising model. This model, introduced in Europe last November, offers Facebook and Instagram users a choice: consent to tracking for a free, ad-supported service or pay for an ad-free experience. The European Commission, acting as the EU's competition enforcer, stated that this binary choice breaches the Digital Markets Act (DMA), which aims to limit the power of Big Tech. Meta has been sent a preliminary finding on the issue.

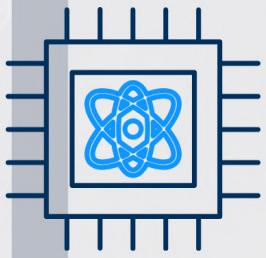
https://www.gadgets360.com/internet/news/meta-eu-charges-tech-rules-violation-pay-or-consent-advertising-model-6011009

7 WeRide Expands Globally as AI Adoption Grows in the Transportation Industry

WeRide is rapidly expanding globally as AI drives innovation in transportation. The firm has begun testing autonomous "Robosweepers" in Singapore and launched an autonomous shuttle bus service at Resorts World Sentosa. Founded in 2017, WeRide offers a robotaxi service in China and has received investments from major automakers.

https://www.cnbc.com/2024/07/30/weride-expands-globally-as-transportation-industry-adopts-ai.html

8 Colorado Leads the Way in Quantum Technologies



Colorado has become a global leader in quantum technologies, thanks to significant federal and private funding. With $40 million in federal funds, $74 million in state tax credits, and $1 billion in private investment, the state is poised for major economic growth and job creation. Quantum technology, which promises processing speeds far surpassing classical computing, is making strides in areas like financial optimization and drug discovery. Colorado now boasts the highest number of quantum-related jobs and is home to four Nobel laureates in the field.

https://www.forbes.com/sites/jonathanreichental/2024/07/28/colorado-takes-the-lead-in-quantum-technologies/?ss=cio-network

9 Google Reverses Decision on Privacy Sandbox: Cookies Will Remain

Google has reversed its plan to replace third-party cookies with the Privacy Sandbox in Chrome. Instead, Privacy Sandbox will now be an optional feature. This shift, influenced by pressure from regulators and advertisers, marks a significant change from Google's original strategy aimed at reshaping online advertising.

https://www.techradar.com/computing/browsers/google-u-turns-on-privacy-sandbox-endeavor-deciding-that-cookies-wont-be-replaced-after-all-heres-what-that-means-for-you

10 Google Maps Introduces Flyover Callouts, EV Charging Stations, and Additional Features

Google Maps has been updated with new features to enhance navigation and EV charging station searches. Key updates include Flyover Callouts to help drivers navigate flyovers, improved reporting of road incidents, and the ability to book metro tickets directly from the app. Additionally, an AI-powered feature estimates narrow road widths for better route planning. EV drivers can now locate nearby charging stations, with real-time availability and plug type details, thanks to partnerships with four EV providers. The updates will roll out soon on Android, with iOS support to follow.

https://www.gadgets360.com/apps/news/google-maps-update-flyover-callout-electric-vehicle-charging-supported-cities-6184337

11 TRAI Implements New SIM Porting Rules from July 1 to Prevent Fraud.

The Telecom Regulatory Authority of India (TRAI) announced new guidelines on March 14, effective from July 1, regarding the replacement of lost, damaged, or stolen SIM cards. Under the new rules, users must wait seven days after replacing their SIM cards before switching network providers. These guidelines, part of the Ninth Amendment to the Mobile Number Portability (MNP) Regulations of 2009, aim to prevent fraudulent SIM swaps and unauthorized network switching.

https://www.gadgets360.com/mobiles/news/trai-new-guidelines-sim-replacement-july-1-6007960

Paytm Unveils Dual-Function Payment Device Featuring NFC and QR Technology 12

Paytm has launched the NFC Card Soundbox, a dual-function device combining mobile QR and NFC card payments. Designed for small merchants, it supports debit/credit card taps and QR scans, with a battery life of up to 10 days. Key features include dual payment options, an instant audio confirmation system, a display screen, and support for 11 languages. Paytm aims to provide a versatile and affordable payment solution for small businesses across India.

https://www.businesstoday.in/technology/news/story/paytm-launches-two-in-one-payment-device-with-nfc-and-qr-technology-check-details-439407-2024-07-30

13 MapMyIndia's Parent Company Alleges Data Theft by Ola Maps

CE Info Systems, MapMyIndia's parent company, has sued Ola Electric, accusing it of using proprietary data to create Ola Maps. The lawsuit alleges that Ola duplicated MapMyIndia's APIs and SDKs and reverse-engineered licensed products, violating their 2021 agreement.

https://www.businesstoday.in/technology/news/story/mapmyindia-parent-company-accuses-ola-maps-of-stealing-data-439320-2024-07-29

14 India to Open Public Consultation on Digital Personal Data Protection Act Rules in August

India is set to implement the Digital Personal Data Protection (DPDP) Act 2023. The central government will release draft rules for public consultation in August, with official notification expected after the current parliamentary session. The DPDP Act requires explicit parental consent for processing data from users under 18 and addresses privacy and age verification concerns. The rules aim to balance strong data protection with practical implementation, avoiding frivolous complaints while ensuring effective privacy safeguards.

https://www.businesstoday.in/technology/news/story/indias-digital-personal-data-protection-act-rules-set-for-public-consultation-in-august-439377-2024-07-30

WazirX Hack: Crypto Exchange Reveals Controversial Plan for Sharing Losses After $230 Million Breach 15

Indian cryptocurrency exchange WazirX has announced its plan to distribute the $230 million loss from a recent security breach among its customers. This decision was influenced by the strategies used by other major global exchanges, such as Mt. Gox and Bitfinex, in handling similar breaches. According to WazirX VP Rajagopal Menon, the company carefully studied these high-profile incidents to guide its approach and ensure a fair resolution for its user base.

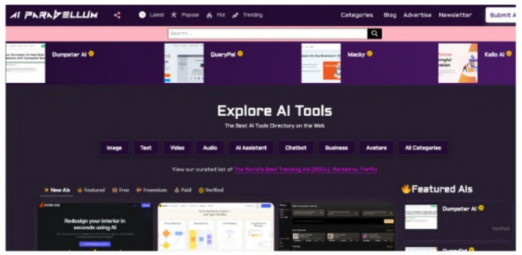
https://www.businesstoday.in/technology/news/story/wazirx-hacked-crypto-exchange-explains-controversial-loss-sharing-plan-after-230-million-hack-439277-2024-07-29

NEWS OF THE MONTH

"Top 5 AI Directories You Need to Know About"

AI Directories, like any other directory, is a collection of AI tools. These tools are sorted out nearly under various categories. Their purpose is evident, to help you find the right AI tool suited to your needs & requirements. A good AI directory minimizes the time you need to navigate and look for the best AI tool for you by having a well-curated library. In this article, we'll be discussing some of the best AI Tools Directories. They're guaranteed to help you find the perfect AI tool for you and save you lots of precious time as well.

AI Parabellum



AI Parabellum is the comprehensive AI Tools Directory on the web, your go-to resource for exploring, evaluating, and engaging with innovative AI tools.. Its homepage features the most commonly explored categories.

AI Tools Directory

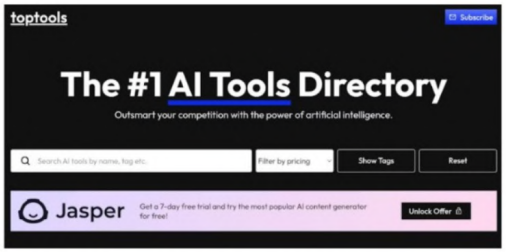
AI Tools Directory
The world's best curated list of AI Tools

AI Tools Directory is one of its kind in terms of accessibility and simplicity. If you're looking for an AI tool to automate, simplify, and assist you in any task, the AI Tools Directory will help you find it in no time. It features numerous categories, and each category boasts a vast collection of highly capable AI tools.

~ Vansh R. Singh BCA 2nd yr

https://www.kdnuggets.com/7-ai-portfolio-projects-to-boost-the-resume

TopTools AI



AI tools directory and discover the best AI tools to boost your business. Outsmart your competition with the power of artificial intelligence. Known for featuring the most popular AI tools worldwide, TopTools AI is one of the best AI Tools Directories.

Futurepedia

Futurepedia

Futurepedia is a free site to help you find the best AI tools and software to make your work and life more efficient and productive. Updated daily, join millions of followers of our website, newsletter and YouTube

Product Hunt

Product Hunt

Product Hunt is a reliable AI Tools Directory. It is known for its massive collection of AI tools of all sorts. It has an easy-to-use interface, ensuring quick navigation around its menus. Aside from a rich library of AI tools, Products Hunt also features various other functionalities, making it a great platform for AI & tech enthusiasts.

~ Vansh R. Singh BCA 2nd yr

https://www.kdnuggets.com/7-ai-portfolio-projects-to-boost-the-resume

7 AI Projects to Boost the Resume

1. Build and Deploy your Machine Learning Application in 5 Minutes

In this project, you will be building a chatbot application and deploying it on Hugging Face spaces. It is a beginner-friendly AI project that requires minimal knowledge of language models and Python. First, you will learn various components of the Gradio Python library to build a chatbot application, and then you will use the Hugging Face ecosystem to load the model and deploy it.

2. Build AI Projects using DuckDB: SQL Query Engine

In this project, you will learn to use DuckDB as a vector database for an RAG application and also as an SQL query engine using the LlamaIndex framework. The query will take natural language input, convert it into SQL, and display the result in natural language. It is a simple and straightforward project for beginners, but before you dive into building the AI application, you need to learn a few basics of the DuckDB Python API and the LlamaIndex framework.

3. Building Multiple-step AI Agent using the LangChain and Cohere API

Cohere API is better than OpenAI API in terms of functionality for developing AI applications. In this project, we will explore the various features of Cohere API and learn to create a multi-step AI agent using the LangChain ecosystem and the Command R+ model. This AI application will take the user's query, search the web using the Tavily API, generate Python code, execute the code using Python REPL, and then return the visualization requested by the user. This is an intermediate-level project for individuals with basic knowledge and interested in building advanced AI applications using the LangChain framework.

~ Vansh R. Singh BCA 2nd yr

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4. Fine-Tuning Llama 3 and Using It Locally

A popular project on DataCamp that will help you fine-tune any model using free resources and convert the model to Llama.cpp format so that it can be used locally on your laptop without the internet. You will first learn to fine-tune the Llama-3 model on a medical dataset, then merge the adapter with the base model and push the full model to the Hugging Face Hub. After that, convert the model files into the Llama.cpp GGUF format, quantize the GGUF model and push the file to Hugging Face Hub. Finally, use the fine-tuned model locally with the Jan application.

5. Multilingual Automatic Speech Recognition

In this project, you will fine-tune a speech recognition model in your preferred language and integrate it with a language model to improve its performance. After that, you will use Gradio to build an AI application and deploy it to the Hugging Face server. Fine-tuning is a challenging task that requires learning the basics, cleaning the audio and text dataset, and optimizing the model training.

6. Building CI/CD Workflows for Machine Learning Operations

In this project, you will learn about machine learning project templates and how to automate the processes of model training, evaluation, and deployment. You will learn about MakeFile, GitHub Actions, Gradio, Hugging Face, GitHub secrets, CML actions, and various Git operations.

7. Fine-tuning Stable Diffusion XL with DreamBooth and LoRA

In this project, you will first learn about Stable Diffusion XL and then fine-tune it on a new dataset using Hugging Face AutoTrain Advance, DreamBooth, and LoRA. You can either use Kaggle for free GPUs or Google Colab. It comes with a guide to help you every step of the way.

~ Vansh R. Singh BCA 2nd yr

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