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Projects

LinkedIn Reverse Search: Client Project

Developed a LinkedIn Scraping Bot: Utilized Python, Selenium, and Requests for efficient LinkedIn data scraping.

Excel Integration: Designed a pipeline to process input Excel sheets with headers (firstName, lastName, companyName) and output enriched data with additional details.

LinkedIn Profile URL Extraction: Automated the extraction and validation of LinkedIn profile URLs for individuals listed in the Excel file using **Proxies** and **Routing in Selenium**, enabling seamless data collection.

Scraping: Extracted experience details, including Company Name, Position Title, Start Date, & End Date for each job.

SalesQL API Integration: Implemented SalesQL API to retrieve verified contact email addresses for each individual.

Data Enrichment Pipeline: Built a pipeline and threading to manage parallel data processing, for LinkedIn and SalesQL.

Database Optimization: Maintained a database of previously scraped data to minimize redundant computations and speed up processing for future requests. On new Excel sheet, it scans database for existing data improving performance.

Next.js Web Application: Developed a **client-facing web application** for **user authentication** and **Excel uploads**, integrating server-side scraping and database query pipelines using **Firebase Auth** and **Firestore DB** for login & data.

Email Delivery via SMTP: Set up a local SMTP server for secure & automated email delivery of Excel file to the recipient. Comprehensive Data Output: Produced Excel sheets enriched with fields including firstName, lastName, linkedInURL, contactEmail, companyTitle, companyName, and companyURL.

Eventbrite & LUMA Scraping: Client Project

Automated Event Scraping: Developed a Python bot to scrape new events from Eventbrite & LUMA platforms every hour. Comprehensive Data Collection: Extracted key event details, including Event Name, Description, Title, startDate, endDate, eventUrl, registrationUrl, and speakersList.

Data Cleaning & Preprocessing: Automated data cleaning, filtering & preprocessing in Python for relevant data extraction. SQL Database Design: Designed an efficient SQL schema to store and manage structured event data seamlessly.

Custom Keyword Filtering: Integrated a dynamic **filtering system** to identify events related to specific client-required topics such as **Cryptocurrency**, **RWA**, and **Tokenization**, and filtering based on **Date Time** and **Location**.

Web Dashboard: Created a **website** to display event data, adding **CRM functionalities** for event tracking & management. **Event Tracking Automation:** Automated the **ingestion pipeline** to handle continuous updates from event sources efficiently. **Client-Specific Features:** Delivered tailored solutions for **keyword-based event categorization** and management to meet client-specific business goals.

Instagram Teaching Reels' Automation - Personal Project

Developed a Python-based pipeline to dynamically create and upload English teaching reels from scratch on Instagram. PlayPhrase.me Integration: Automated raw video collection and downloading by leveraging PlayPhrase.me API, storing initial raw videos on Google Drive for free storage.

Advanced Video Editing: Utilized **FFMPEG** for video editing, including overlays, image insertion, and transitions, combined with **Photoshop** for logo and overlay design. Creating a **preset** for all the videos to use.

AI-Powered Subtitles: Integrated WhisperAI to generate accurate subtitles with precise timestamps for audio captions.

Cloud Optimization: Stored processed video URLs in Azure Blob Storage for efficient & scalable video management.

End-to-End Workflow Automation: Orchestrated the entire video creation and deployment pipeline using **Azure DevOps** and **CRON jobs** for a fully human-less, automated bot workflow.

Automated Instagram Uploads: Leveraged **Selenium** to automate Instagram video uploads, employing **Docker containers** on **Ubuntu OS** to run scripts seamlessly. Marking **English Words used** and created a **Preview Dashboard** for personal viewing. **Session Management: Session persistence** by storing & reusing Chrome data to avoid repeated logins across all sessions.

Movie Controller Application - Personal Project

Cross-Platform Media Controller: Developed a **Python-based client-server application** enabling remote control of a PC for streaming services like **YouTube**, **Netflix**, **Prime Video**, and **FMovies** to simplify media control through **Phone** or **Smart Watch**.

Client-Side Interface: Designed a Smart TV remote-style interface using Vite and React for intuitive interaction.

Remote Communication: Configured **POST requests** from the **React client** to a **Flask** for seamless command transmission. **Device Automation:** Integrated **Python libraries** like **PyAutoGUI** for emulating PC controls, including typing, searching, and browser manipulation, allowing control of these streaming platforms' websites.

Screen Object Detection: Leveraged **OpenCV (CV2)** for image recognition to identify screen objects and perform targeted actions like click, drag, hotkey presses, and typing. Performs actions as it pops (e.g., skipping intro, popup & redirecting ads). **Ease of Access:** Made the **React client** accessible via web browsers, allowing users to control their PC from anywhere within the network.

Innovative Remote Experience: Enabled users to control movies and media streaming platforms with convenience and automation directly from their **personal devices**.

Technologies

Languages: Python, JavaScript, Java, TypeScript, C++, C#, Rust, Bash, PowerShell, R, Go, Ruby, Swift Web Technologies: React, Flask, NextJS, NodeJS, Django, FastAPI, Express, ASP.NET, Angular, HTML, CSS, Jinja, YAML Databases: SQL, PostgreSQL, Azure SQL, Redis, AWS RDS, MongoDB, DynamoDB, Firebase, Firestore Cloud & DevOps: Azure, AWS, CI/CD, Kubernetes, Docker, Jenkins, Terraform, Ansible, PowerShell, Yarn, NPM, Azure

Functions VM Blob, AWS Lambda S3 EC2, RBAC.

Operating Systems: Windows, Linux (CentOS, Ubuntu), macOS, Embedded Systems, RaspberryPi, Arduino APIs and Protocols: REST APIs, OpenAPI, Swagger, WebRTC, SOAP, GraphQL, MQTT, WebSocket, OAuth, JSON-RPC Other Tools & Technologies: Kafka, Jira, GitHub, Nginx, VSCode, Azure AKS, Metamask, Fireblocks, Cron, WebSockets