

Location3: A Location Scouting Platform for the Support of Film and Multimedia Industries

Authors : Dimitrios Tzilopoulos, Panagiotis Symeonidis, Michael Loufakis, Dimosthenis Ioannidis, Dimitrios Tzovaras

Abstract : The domestic film industry in Greece has traditionally relied heavily on state support. While film productions are crucial for the country's economy, it has not fully capitalized on attracting and promoting foreign productions. The lack of motivation, organized state support for attraction and licensing, and the absence of location scouting have hindered its potential. Although recent legislative changes have addressed the first two of these issues, the development of a comprehensive location database and a search engine that would effectively support location scouting at the pre-production location scouting is still in its early stages. In addition to the expected benefits of the film, television, marketing, and multimedia industries, a location-scouting service platform has the potential to yield significant financial gains locally and nationally. By promoting featured places like cultural and archaeological sites, natural monuments, and attraction points for visitors, it plays a vital role in both cultural promotion and facilitating tourism development. This study introduces LOCATION3, an internet platform revolutionizing film production location management. It interconnects location providers, film crews, and multimedia stakeholders, offering a comprehensive environment for seamless collaboration. The platform's central geodatabase (PostgreSQL) stores each location's attributes, while web technologies like HTML, JavaScript, CSS, React.js, and Redux power the user-friendly interface. Advanced functionalities, utilizing deep learning models, developed in Python, are integrated via Node.js. Visual data presentation is achieved using the JS Leaflet library, delivering an interactive map experience. LOCATION3 sets a new standard, offering a range of essential features to enhance the management of film production locations. Firstly, it empowers users to effortlessly upload audiovisual material enriched with geospatial and temporal data, such as location coordinates, photographs, videos, 360-degree panoramas, and 3D location models. With the help of cutting-edge deep learning algorithms, the application automatically tags these materials, while users can also manually tag them. Moreover, the application allows users to record locations directly through its user-friendly mobile application. Users can then embark on seamless location searches, employing spatial or descriptive criteria. This intelligent search functionality considers a combination of relevant tags, dominant colors, architectural characteristics, emotional associations, and unique location traits. One of the application's standout features is the ability to explore locations by their visual similarity to other materials, facilitated by a reverse image search. Also, the interactive map serves as both a dynamic display for locations and a versatile filter, adapting to the user's preferences and effortlessly enhancing location searches. To further streamline the process, the application facilitates the creation of location lightboxes, enabling users to efficiently organize and share their content via email. Going above and beyond location management, the platform also provides invaluable liaison, matchmaking, and online marketplace services. This powerful functionality bridges the gap between visual and three-dimensional geospatial material providers, local agencies, film companies, production companies, etc. so that those interested in a specific location can access additional material beyond what is stored on the platform, as well as access production services supporting the functioning and completion of productions in a location (equipment provision, transportation, catering, accommodation, etc.).

Keywords : deep learning models, film industry, geospatial data management, location scouting

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