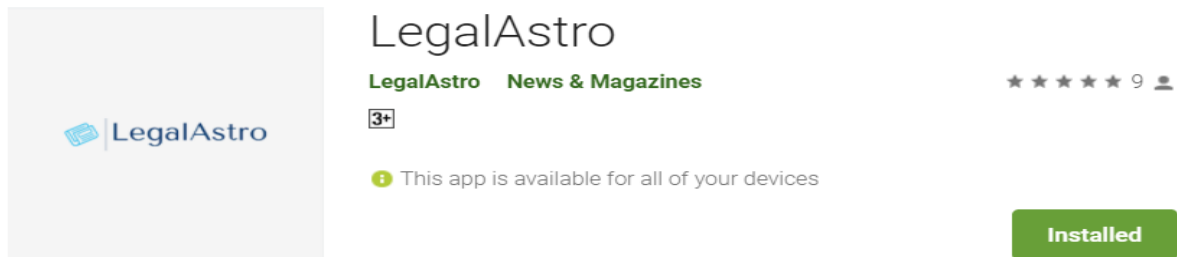


Case Study:LegalAstro



Brief Description of the Product

LegalAstro is a comprehensive **Legal News Portal** that keeps users updated on the latest legal news from India. With an eye-catching layout, yet easy and convenient, one can now be sure that you won't miss anything important. Moreover, the latest information will be available at your fingertips making it possible for you to make legal assessments and manage legal risks more effectively.

This app provides all latest notifications, circulars and notices issued by the Ministry of Corporate affairs, Income Tax, CBDT, FSSAI, IRDA, SEBI and other regulators of India. This application allows various features like **filtering news feeds** based on tags like GST, MCA, etc. to allow the users a certain amount of freedom with the app. One could save their favorite articles in the saved collection, and view them whenever they wished to. Apart from that, one could **share their favorite articles** via WhatsApp, Facebook, Twitter and mail and go to the publisher website directly to validate the news or know more about it. Though we had great ambitions for the application to make it the priority for any Indian Businessmen as a news app, and bringing in sentiment analysis, public reactions, Twitter API Integration, Automated News Scrapers and Publishing, we had to stop due to lack of funds and changes in priority among projects.

Motivation and the Idea Generation

I was a Freelance Application Developer, and after a couple of Projects with a Finance Based Consultancy Company, **Firmsap Ventures**, based in Delhi, we came under an MoU agreement, making me responsible for the development and management of all the needs of the applications/products, and the company responsible for the funding requirements. Mudit Goyal, currently the CEO of Firmsap Ventures, mentioned me the need of a mobile application in the market for important business updates, and we discussed in great depth about how it could make a difference, and what we will do to make it much easier for us as compared to other news publishing apps. The vision was astonishing and the **goal was to automate the whole news publishing mechanism as much as possible**. We discussed integrating Twitter APIs, Automated Publishing of Articles directly with the reviewing team having a minor task of validating the news.

Building the Concept and Product Development

Any News Application needs at least two interfaces, the user and the publisher, to be interactive. So, the basic building requirement was an interface for the company employees to publish the news articles, circulars, PDFs, notices, etc., through that interface, which would be then saved in cloud (**Firebase**, in our case), and getting published in the mobile app on

The screenshot displays the 'LegalAstro Editors' web interface. The main section is titled 'Publish Your Article' and contains several form fields: 'Heading' (with a sample text 'This is a Sample Article'), 'Upload Article Image' (with a 'Browse...' button and a sample image path), 'Body' (with sample text), 'Target Users' (with a dropdown menu set to 'Professional'), 'Law' (with a dropdown menu set to 'SEBI'), 'Target States and Union Territories' (with a dropdown menu set to 'Assam' and a 'SELECT ALL' button), 'Information Type' (with a dropdown menu set to 'Notice'), and 'Number of PDFs' (set to '1'). There is also an 'Upload PDF' button. On the right side, there is a 'Buffer Articles' section showing a sample article with a header image, title 'This is a Sample Article', date 'GST Dated Tue Nov 16 2021', body text, and a 'Source Link' button.

refreshing of the application. Since office employees prefer a PC over a mobile phone for their working requirements, we decided on going for a web application for the publishing side (<https://legully-news-genie.web.app/>).

Worked on, and discussed the various requirements of the news features with the publishing team, and built a viable product for their convenience. This page shows a basic form for capturing the news features like heading, image, body, targeted users, laws, states, information type, supporting PDFs, if any, source link, etc. and publishing the accepted info into the cloud for storing. Upon discussions with the team, I came to know that a visual representation of the article would help a lot before publishing it for the users, so added a dynamic article preview on the right side of the webpage.

← Buffer Articles

Information Type IT ~

Select Article Circular No. 5/2021 - Order under section 119 of the Income-tax Act, 1961 ~

Circular No. 5/2021 - Order under section 119 of the Income-tax Act, 1961
IT Website

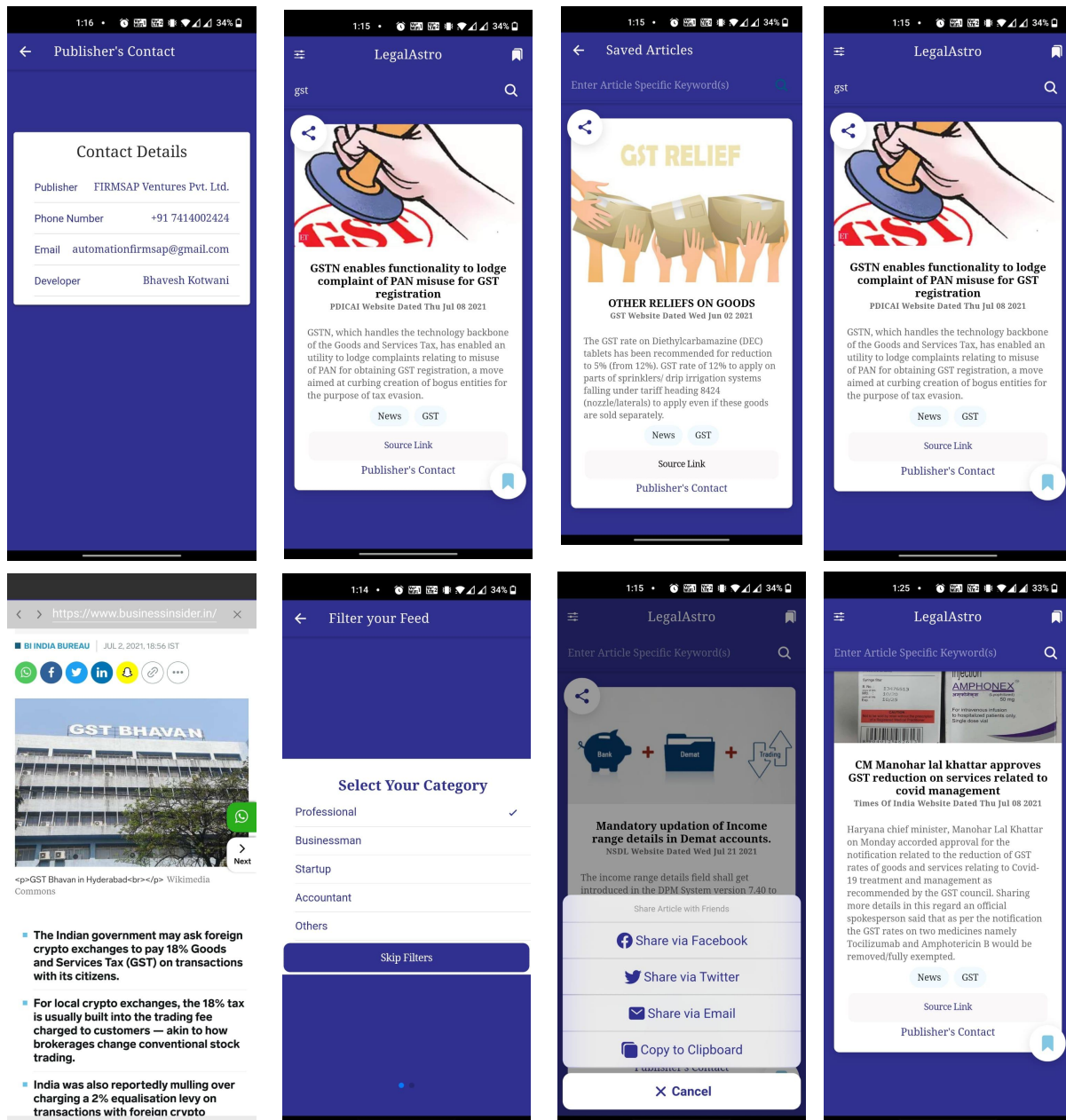
Source Link https://www.incometaxindia.gov.in/news/circular_no_5_2021.pdf

Auto Fill This Article

Since the main aim was to automate the whole process, I integrated the python based web scrapers for extracting latest news from government sites like SEBI, GST, which fetched the heading, image and some basic info for the news article, into the web application for making it easy and reducing the amount of time consumed in the publishing process.

Link to the python scraper notebook: <https://bit.ly/3nmjhOd>

Coming to the user end, we understood that we are making the user feed personalised, and for that, the user needs to be authenticated for using the application, but we cannot ask for user login repeatedly, since that would draw our customers(the users) away. So, we came up with the idea of auto login based on **Device Identification Token**, i.e., after the first login using email, the device identification token was stored as UserId in the firebase cloud servers. So, we didn't need to re authenticate the users again and again.



LegalAstro included an in app browser, article sharing, saving and filtering feed, searching articles based on keywords, and many more features were to be added like Laws Collection, Article Reactions, Tweets, etc. We constantly sent mails to the users to keep high engagement, and the notifications were enabled each time a new article was published to engage the users.

Being a Computer Science Student, I applied the principles of software development techniques: **Waterfall** and **Agile Development** to achieve the product development goals more efficiently.

The Waterfall Phase of Development (15-20 Days)

- Idea Creation.
- Concept Testing and Idea Validation.
- Aggressive Development and reviews every two days.
- Building the MVP, and publishing on Play Store.

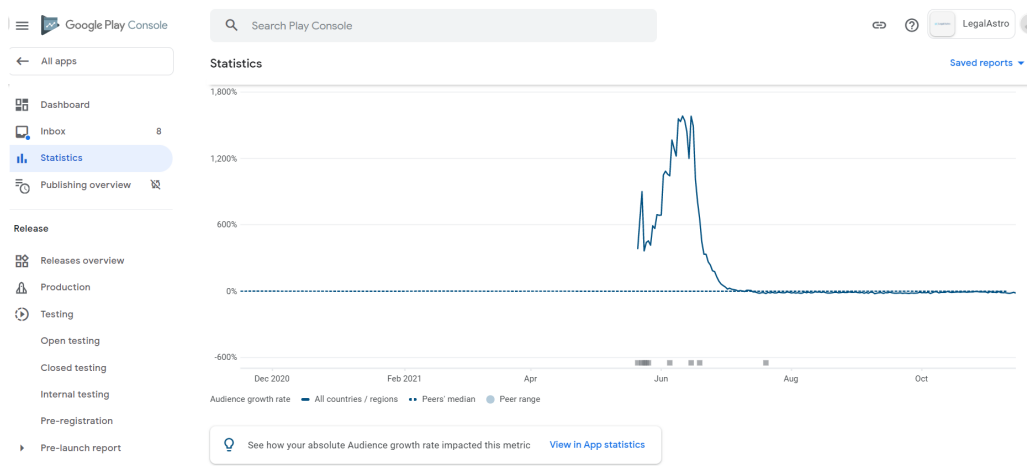
Agile Development Phase (7 Days * 6 Cycles)

- Building/Modifying Marketing Mechanism (FB Ads, Sendinblue).
- Getting user reviews.
- Discussion with the Team.
- New Ideas/Features.
- Making changes in Product, removing Bugs.

Marketing Channels (Market Testing & Commercialization)

LegalAstro got published as a News App in the play store, now the goal was to draw more customers for the application. Upon discussion with Mudit, we decided to go with **Facebook Ads Manager**, and set a daily limit of 100 INR for advertising. We also worked with **Sendinblue email marketing**, since the company had email contacts of tens of thousands of business professionals across India. We selected various news templates, built captions, for reaching the targets, made advance targeting, all via Facebook, and published the ad setting the

target for app installs. Initial Phase was rough, which cost as 50 rupees for acquiring one user, and really soon the **costs dropped to 5 rupees for acquiring one user install**. We also advertised our app in WhatsApp and telegram channels, and since the application was in its initial phase, there were a lot of bugs or undesired features which needed a lot of work, and all had to be managed single handed by me. To manage the user retention, we also came up with the idea of weekly newsletters on mails for the current users, and this helped us in gaining their trust as a news application. **We acquired approximately 250 users within a month**, and the daily acquisition was increasing with time. The user loss was also decreasing upon improvements in the application. But, the marketing was paused all of a sudden by the company due to lack of funds, and we had to change our priorities which is visible by the fall in graph of user growth around July, 2021.



Revenue generation wasn't the main aim. The target was to acquire more user base, and increase the popularity to at least 2k-3k users, after which exclusive news collections were decided to be made available only to premium members. The first year of the product development phase was focused on achieving as many users as possible.

Conclusion

Overall, LegalAstro gave me an overall industrial experience, from **development to marketing, managing costs, working with teams**, and **understanding what the user wants**, rather than imposing the product we like on them. I came to understand that we have to constantly pivot and update the product based on the user impressions, and **focus on first bringing out an MVP** rather than launching the complete product all at once. LegalAstro had at least 30 updates in its 2 month journey, where we removed bugs, redesigned the UI, and simplified the process as much as possible for the users. We also worked with **AEO for the application** to increase the visibility in the app search on the play store. LegalAstro gave me an overall understanding of the product management, since most of the issues were identified by the company employees and myself and we had to come up with an instant solution, and we constantly reviewed the user acquisition and retention, and worked on building new features.

As far as the **goals of automation** are concerned, we **automated the news extraction** from the source (using a python scraper), yet the team had to write the article body, and manage the tagging of articles. We used **Postman for API integration** purposes, and since there weren't any other developers for this project, the process took time and couldn't make it to the goal of full automation any earlier.

Working in collaboration with another developer could have paced the building process, and we could focus more on reducing the user loss, and automated publishing of articles.

Know more about me and my work here: <https://pitchers-pitchme.web.app/>