

Technical Assignment.

Front End Web Developer



Emerging technologies, require a certain amount of exploration and experimentation before their true use cases can be discovered. Our vision is to empower enterprise using drones. However at this point in the technological adoption cycle, the true value proposition is still an unknown. Therefore, we get to do the exploration and experimentation that will hopefully come to define enterprise drone use cases.

As a web developer, there are a lot of exciting things that need to be done in this environment. As new use-cases are discovered, prototypes will need to be built, and as some of these use cases prove to be of real value to the customer, portals will have to be built to deliver large streams of data, insight and analysis. All this work will have to be modular, so that the same features can be incorporated into other industries if it is relevant.

We are looking for the kind of person that enjoys crafting great user experiences. Someone who can step into the shoes of the customer, and build tools from their point of view. The person who can harness the power of the world wide web and leverage that along with our drone data and truly create value for the customer. Someone who derives pleasure in doing a task, and doing it right.

You will get to learn new things across domains, experiment and iterate on different value propositions and build plenty of small nifty features, and as the requirements mature, full fledged portals that provide a world class, enterprise grade experience for all of our customers.

It's not necessarily the easiest, but it certainly the most rewarding. If this sounds like something you'd be interested in, then go ahead with the assignment. I look forward to hearing from you.

Warm Regards,
Samarth Hattangady
Author, *This PDF*

Technical Assignment.

We want you to create an interactive map based visualization tool for data that is spread out across time and space. We have attached some examples for projects below. If you would prefer some fancy terminology, we are looking for an interactive visualization of temporal geospatial data.

We are looking for:

- web interface for desktop clients. It need not be usable on mobile browsers.
- A clean, minimalist, intuitive UI/UX.
- The final representation must be map based.

Some guidelines to help you along your way (These are some pointers to give you a sense of what we are looking for. You may choose to adapt them or ignore them if that improves the overall experience):

- Changes in dashboard based on zoom level/map viewport and user interaction.
- The options presented to the user would not be the same when viewing the globe as a while viewing a single city/area/event
- Changes in markers/icons present on map based on zoom level/map viewport and user interaction
- Adding additional data (images, videos, text) that suits the project you have selected, which may appear and disappear with user interaction
- Use of clean icons and animations over text based instructions
- Design of UX to draw the user to certain areas/events that are of greater importance

For the map, use of leaflet, openlayer or mapbox is preferred. There is no restrictions on language or technical stack.

As a part of the submission, host the project on a service provider and send us a link. Also send us the files or a link to the repository where they are hosted. If unfamiliar with hosting, Firebase is the suggested platform.

Some examples: Note that you can use these examples exactly as presented, combine elements of each, or just be inspired by them to select something entirely different. Just ensure that whatever you select has elements spread

across time and geography, and is interesting to explore in this manner. Also ensure that you do not use any private data in your projects.

Example 1: African Cup of Nations

Build a project that explores the last few iterations of the African Cup of Nations. The African Cup of Nations is a football tournament hosted every two years. Create a project to explore where each edition was hosted, who won, who participated, and maybe some interesting statistics about that edition of the tournament. You can also give the users the option to go to each stadium where matches were played, and some details about both the stadium and the city it is in. Allow users to select which team they were supporting, and why. Feel free to explore the data and try to find some interesting correlations and point them out as the users explore this.

Example 2: The Mongols

Build a project that studies the growth of the Mongol Empire. Show how the territories grew over time and how other empires tried to resist this expansion. Highlight certain key battles that were fought and how they affected the empire. You can also show another empire that rose and fell entirely during the reign of the Mongols, and certain factors which led to their downfall. Allow users to add extra details to battles.

Some other ideas:

- The rise in popularity of the Beatles and how their fame spread
- The spread of Sony around the world
- The spread of smartphone usage
- The outbreak and subsequent control of H1N1 disease
- The global usage of Bitcoin
- The spread of Buddhism
- The Harry Potter Phenomenon

Be creative. Overall, the project must be intuitive and exciting to explore. Focus on building a great UX. If you are unable to entirely populate all the data, focus on 3-4 elements/dashboards that will give us an understanding of the experience that you are trying to provide, and mention this in your submission. A small, clean project with missing data is preferable to one where all data is present at the cost of the overall UI/UX.

I hope you enjoy doing this assignment. Waiting to hear from you.

Yours faithfully,
Samarth Hattangady
Author, *Technical Assignment: Full Stack Web Developer*