



Portfolio

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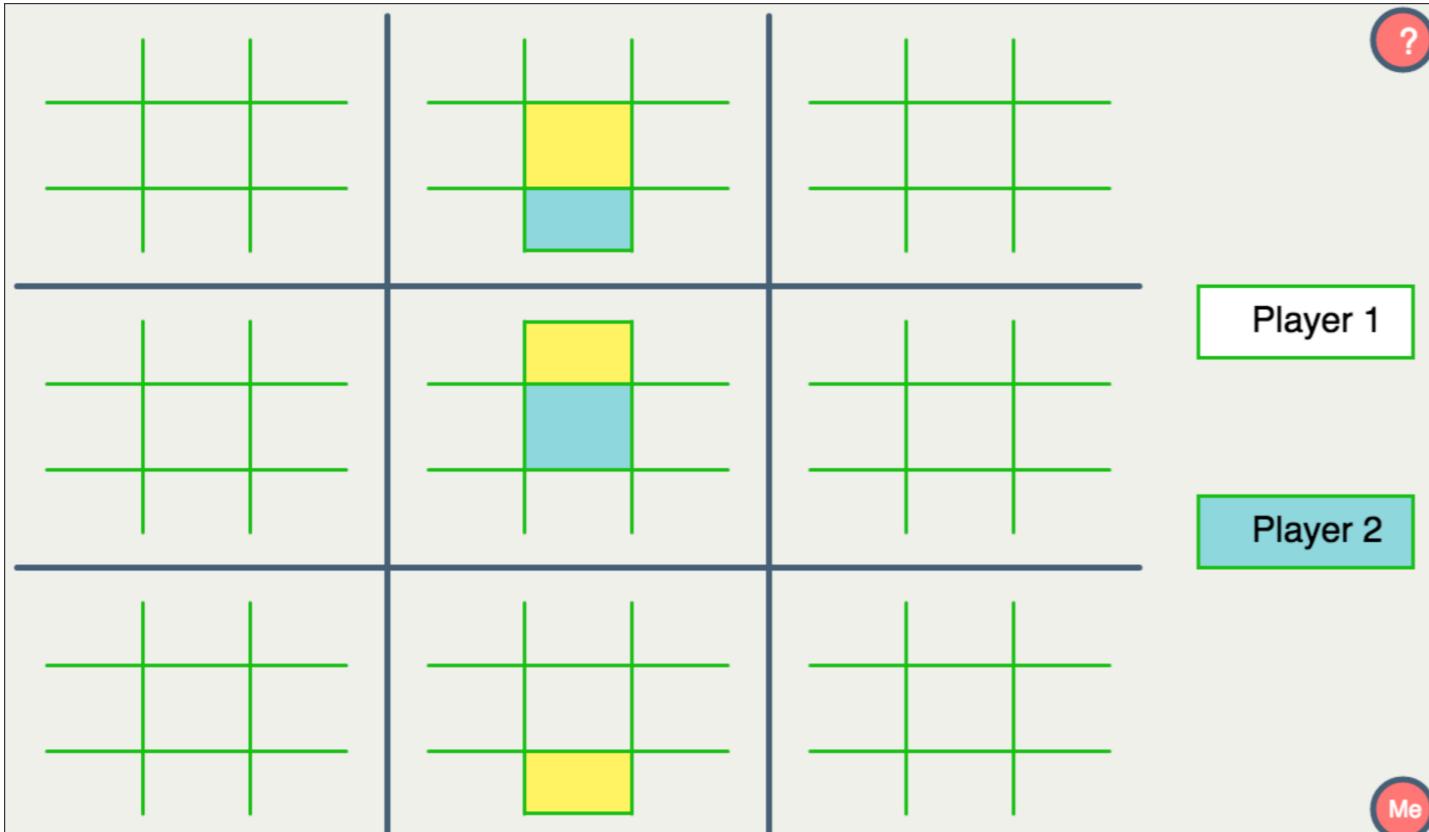


This portfolio is a selection of my work in front-end applications and applications involving human-computer interaction. There are several other libraries that I have built, that are not spoken about in this portfolio. Please take a look at my CV for a more comprehensive picture of my engineering and research experience.



2013 and before

Tic Tac Tithmic: processing.js



A 2-player ultimate tic tac toe game that I built after getting tired of drawing these grids on paper, and teaching friends the rules of the game.

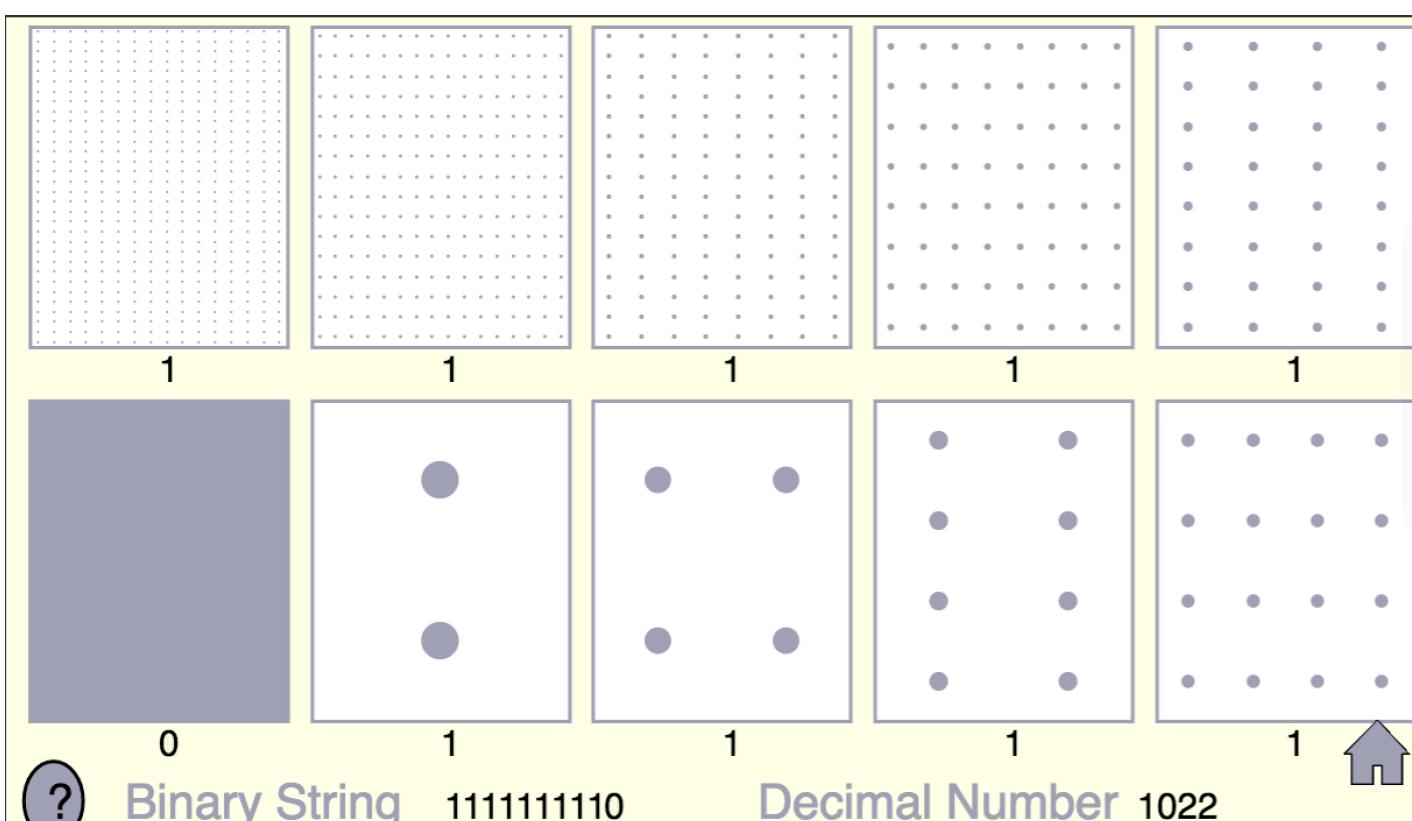
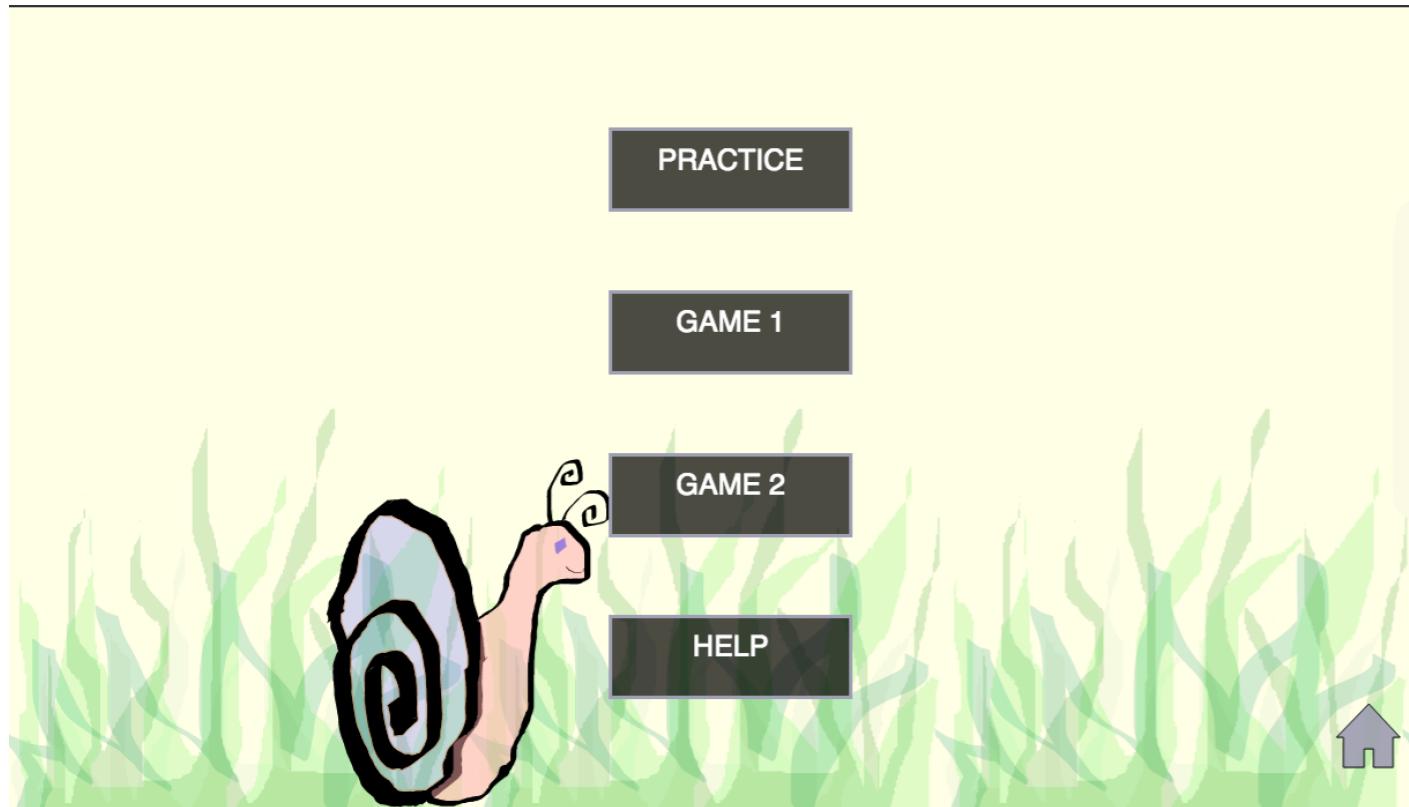


The block in which someone ought to make the next move is highlighted, easing a new comer into the game.

This was the first game I ever designed.

[https://arunasank.github.io/
TicTacTithmic/](https://arunasank.github.io/TicTacTithmic/)

Binary Addition: processing.js



I constructed this project as an educational aid for the Computer Science Unplugged project.

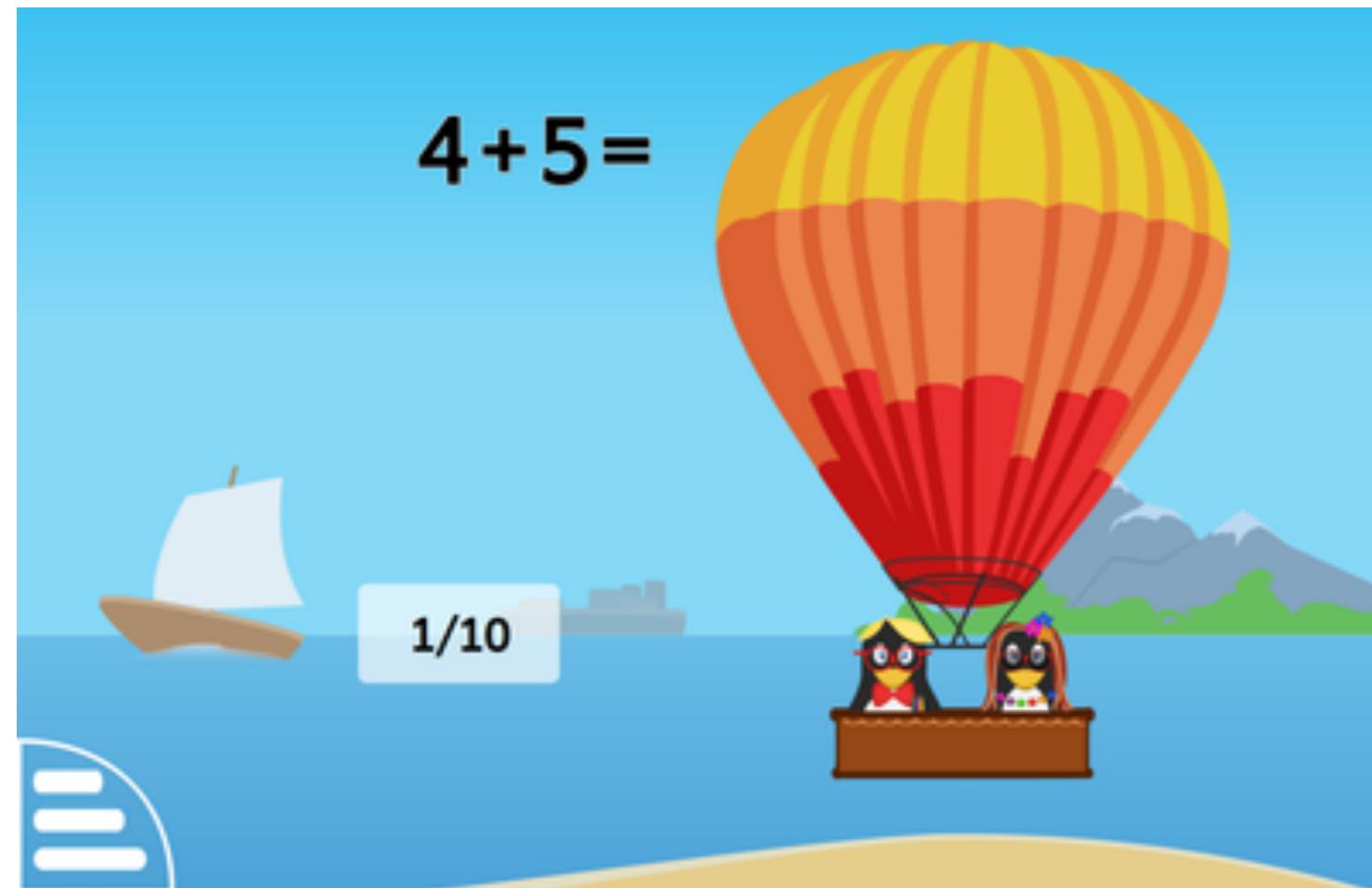
The game teaches the concept of binary addition through a simple switch on, switch off interaction, as a set of binary blocks fall down.

I enjoyed writing a recursive function to generate the dotted blocks.

<https://arunasank.github.io/BinaryNew/>

2014

GCompris: Qt QML, C++



I designed three games to teach addition, subtraction and multiplication on the [GCompris project](#). The games were written in C++ and used the Qt QML framework.

This was my first feature contribution to an open source project.

[https://cgit.kde.org/gcompris.git/log/?
qt=author&q=Aruna](https://cgit.kde.org/gcompris.git/log/?qt=author&q=Aruna)

Scinamo: HTML5, JS, cocos2D, PhoneGap, Cordova



I co-founded the technical team of Scinamo, a science education start-up set up under the aegis of Amar Chitra Katha and Start-up Chile

I helped design a virtual science universe containing games, associated theory concepts, and quizzes. The application was available on the web, Android and iOS. The entire product was designed in a year.

Built with: Abhiram Talluri and Mohammed Shainaaz

2015

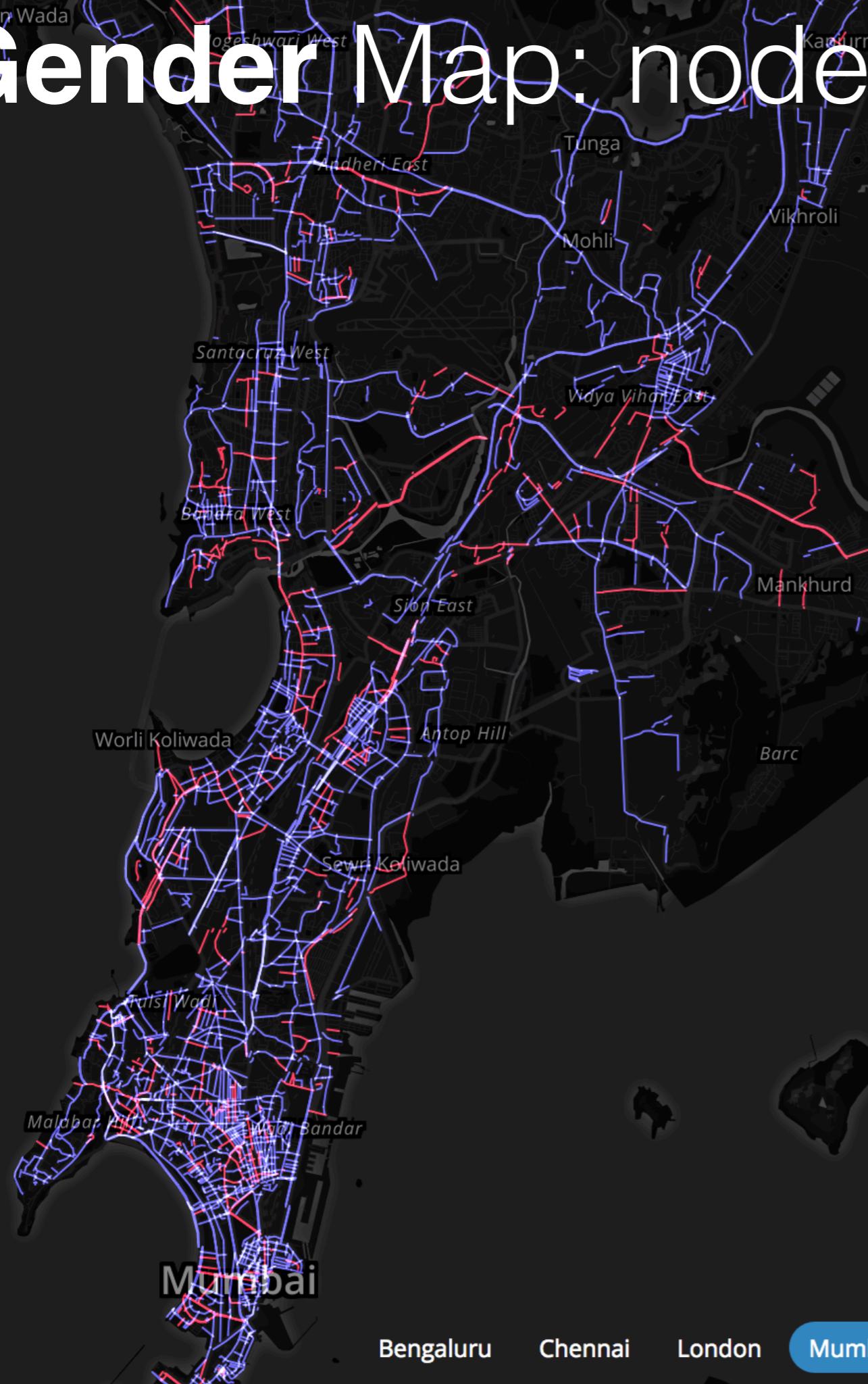
Wikipedia and Indian Classical Music

▼ Date	Name	Thumbnail	Size	Description	Current version
14:22, 6 April 2017	Desh - Tejas Mallela.wav (file)		31.14 MB	Upload file with a higher bitrate.	Yes
04:06, 5 April 2017	Desh - Tejas Mallela.wav (file)		2.82 MB	User created page with UploadWizard	No
16:29, 1 October 2016	Evvare Ramayya Nee Sari-Gangeyabhushani-Adi-Tyagaraja~Ramakrishnan Murthy-R K Shriramkumar-K Arun Prakash.wav (file)		25.39 MB	User created page with UploadWizard	Yes
09:57, 4 May 2016	22MaloonMaruganaiViruthamBhairavi.wav (file)		49.47 MB	User created page with UploadWizard	Yes
04:59, 24 February 2016	Theyyam-audio.wav (file)		296.34 MB	User created page with UploadWizard	Yes
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17:01, 17 September 2015	Instrumental music by P.S. Mukherjee of Cawanpur(Kanpur) - Side 2.ogg (file)		5.2 MB	User created page with UploadWizard	Yes
17:01, 17 September 2015	Instrumental music by P.S. Mukherjee of Cawanpur(Kanpur) - Side 1.ogg (file)		5.23 MB	User created page with UploadWizard	Yes
18:21, 15 September 2015	Viriboni, rendered on the Veena.ogg (file)		6.94 MB	User created page with UploadWizard	Yes

[https://commons.wikimedia.org/wiki/
Special:Contributions/Arunasank](https://commons.wikimedia.org/wiki/Special:Contributions/Arunasank)

In 2015, as I was browsing through Wikimedia Commons, I saw that there were no recordings pertaining to Carnatic music, a form of South Indian classical music. I have collected recordings from renowned artists, and from concerts and improved the number of such recordings to ~50. I also investigated the appropriation of public domain music under copyright, by happen-stance, as recorded on my blog during this project

Gender Map: nodeJS, Mapbox Studio



Extracted street names in 7 cities from the OpenStreetMap project using MapReduce algorithms

These extracted street names were then passed through NamSor, an NLP engine that classifies names by gender. The results were visualised on Mapbox Studio.

Built with: Sajjad Anwar

<https://blog.mapbox.com/mapping-female-versus-male-street-names-b4654c1e00d5>

Chennai Flood Map: mapbox-gl-js, HTML5, CSS, JavaScript

Flooded Streets

சென்னை
7449 inundated roads reported

This is a crowdsourced effort to map inundated roads in Chennai. Report a flooded street by zooming into the map and clicking it. All the data is open.

Flood Layers

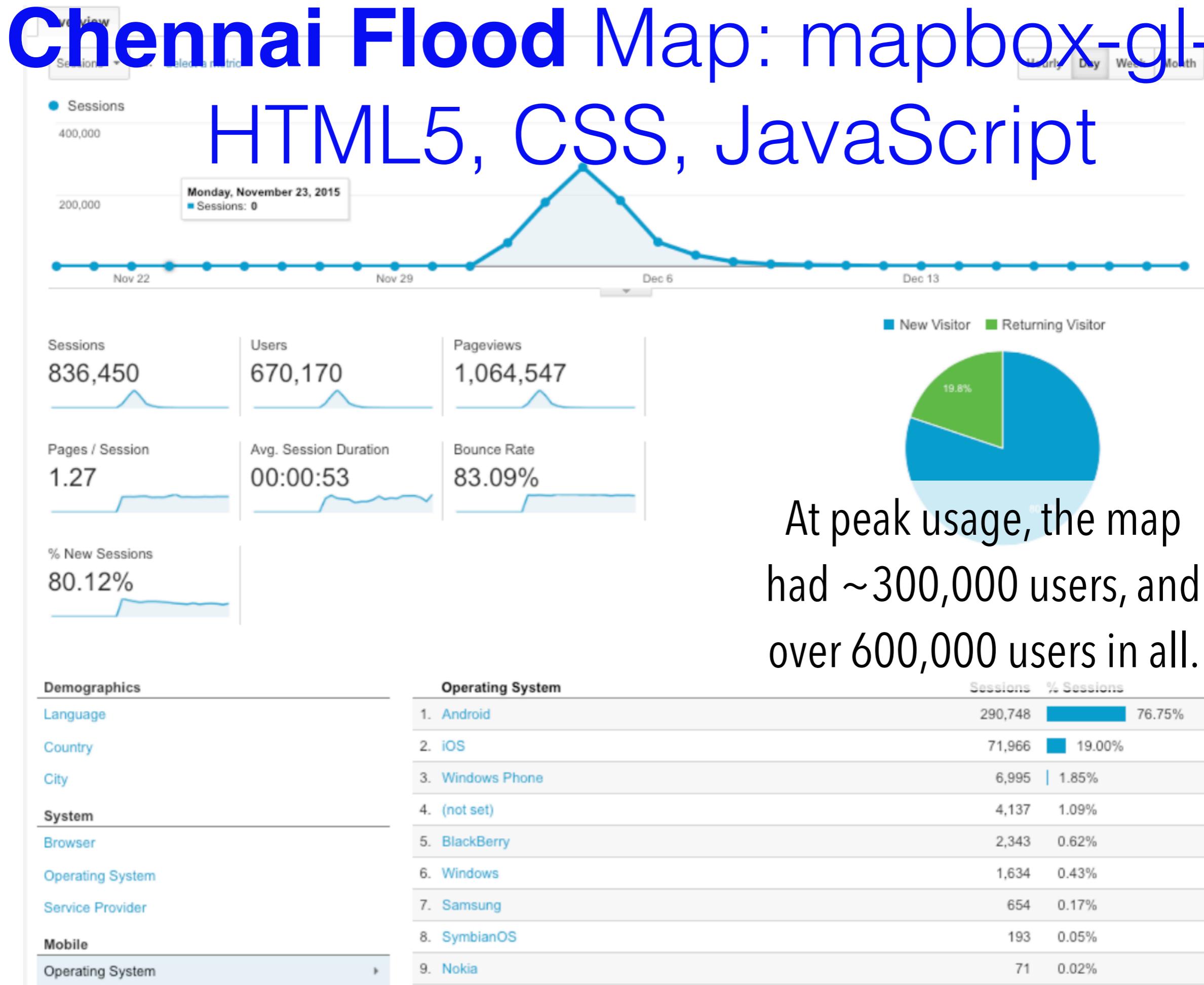
- Vulnerable and Inundated areas
- Flood relief camps (Open on Nov 22)
- Flood relief camps (Including closed)
- Water logged points

The Chennai flood map was built in response to the 2015 floods in Chennai. The interface was kept deliberately simple - touch a street to mark it as flooded, touch it again if the floods have receded.

Built with: Sanjay Bhangar, Arun Ganesh and Sajjad Anwar

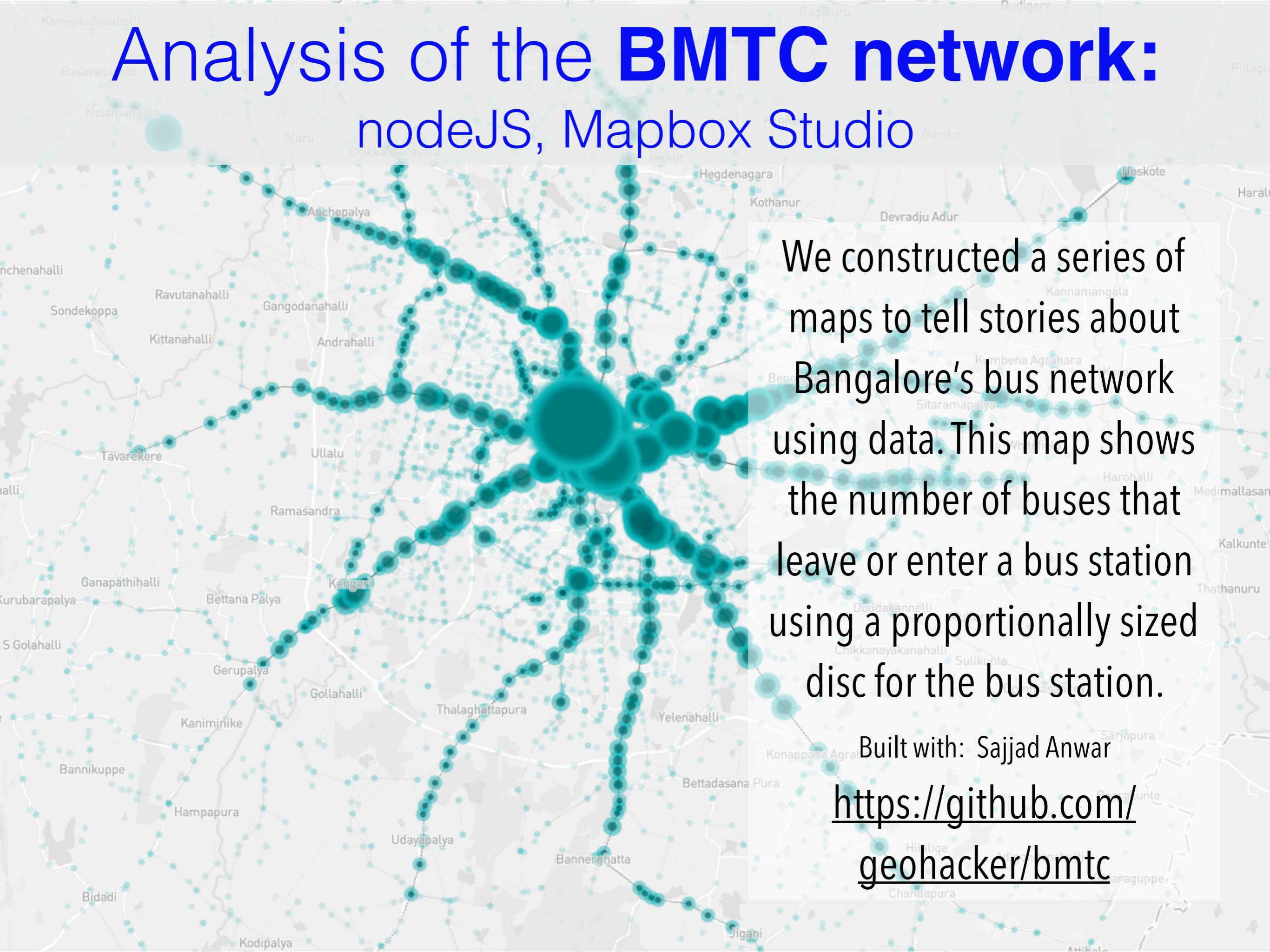
<https://github.com/osm-in/flood-map>

Chennai Flood Map: mapbox-gl-js, HTML5, CSS, JavaScript



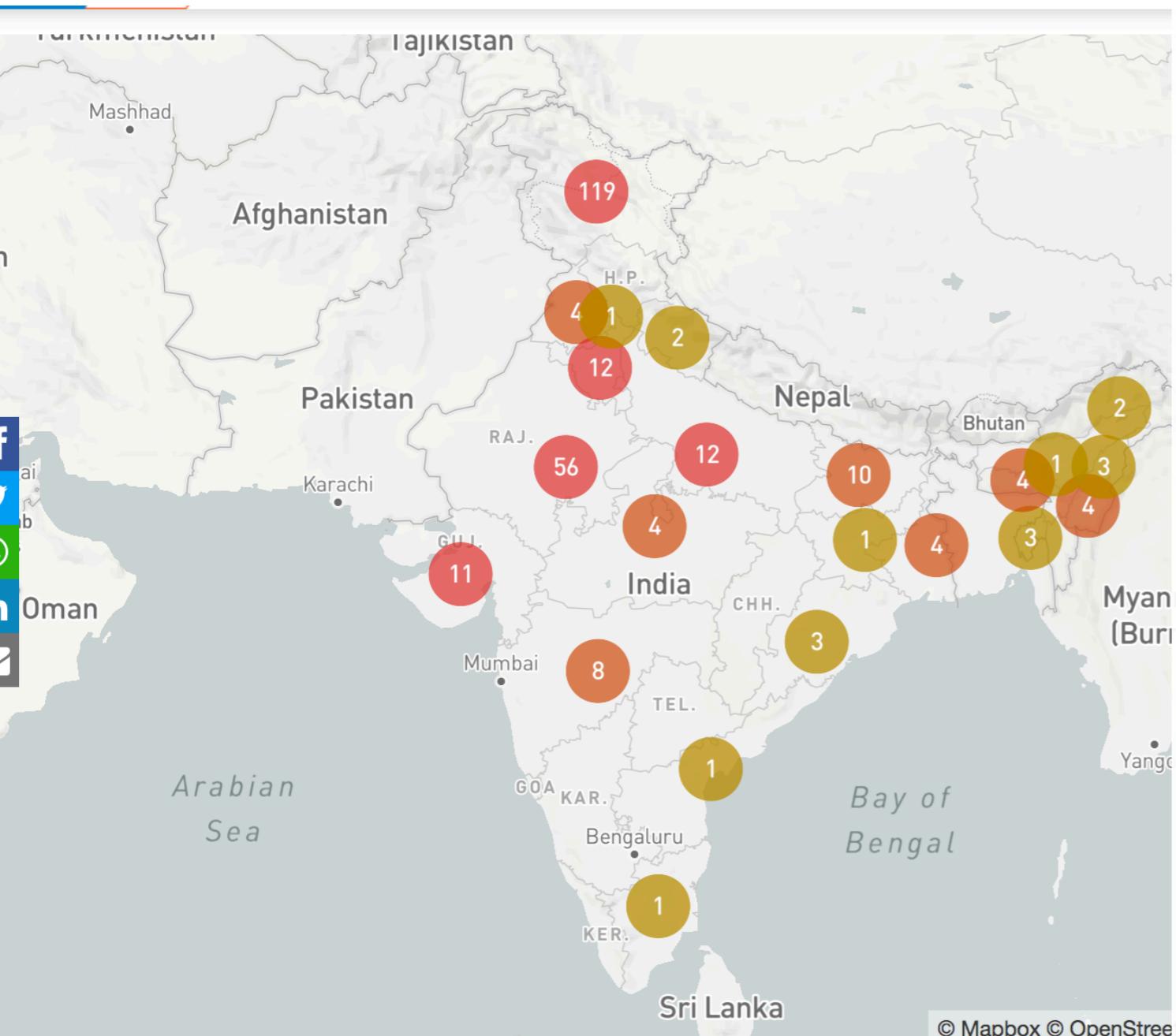
At peak usage, the map had ~300,000 users, and over 600,000 users in all.

Analysis of the BMTC network: nodeJS, Mapbox Studio



2016

Internet Shutdowns Tracker - mapbox-gl-js, HTML5, CSS, JavaScript



In a partnership with the Software Freedom Law Centre, I mapped the scale of Internet shutdowns in India. Internet shutdowns critically affect communication, especially in sensitive areas where journalists, mitigation agencies, and families can often struggle to establish contact with the real world. Internet shutdowns violate the fundamental right to speech and expression, one of the 6inalienable rights in India.

Built with: Ajith Ranka and Sarath Madayil

<http://internetshutdowns.in/>

2017

Sand Mining Tracker - nodeJS, turfJS



Built in partnership with *Veditum*, a conservation organisation.

This library returns map tiles in the vicinity of rivers. The map tiles are then scrutinised by environmentalists for evidence of sand mining.

[https://github.com/veditum/
riverbanks](https://github.com/veditum/riverbanks)



Fin.

