# Thoroute

Plan your bus routes, **smarter**

Get Started →

What is even happening?

# The First Review

→

# What is Thoroute?

Thoroute or Thorough route is, in essence, an advanved algorithm that's capable of planning, developing and redirecting routes for existing public transport systems and, if implemented in a large enough scale, will also be capable of predicting routes for new buses with no previous records.

# What do we aim to achieve?

Current solutions for deciding the validity and requirement of buses are mostly manual and, from what we could find, not optimized to maximise profit, but to achieve daily targets and monthly passenger counts. Thoroute aims to change that by bringing a profit first approach to bus route planning and deployement.

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# What makes us different?

There are not many solutions to the specific problem that current public transport systems face. All of them rely on manual decisions based on a lot of guesswork. Thoroute uses an equation that considers all possible factors of a bus and then calculates its efficiency. Plus, it's open source. Anybody can access Thoroute's code and make it suit their own needs!

# Why are we doing this?

Almost all of us have travelled via bus at least once. Must say, that feeling is unparalleled. In recent years however, our primary bus service, KSRTC, has gone into debt and does not seem to turn over a profit no matter what. Our need to have a public transport system plus a slight bit of nostalgia drove us to adopt this idea.

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The star of the show

# The Algorithm

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# The Inputs

Factors such as the fuel efficiency, max earnings a day and the condition of the bus is taken in from the user along with route data such as max distance and number of stops. Every bus is then given a quality rating and checked against each and every route.

# The output

After all the comparisons are done, each bus is assigned it's most optimal route. This repeats until no buses remain. Each route could have multiple buses, but the more buses there are, the less efficient it gets for other buses. The matching algorithm is capable of recognising all this data live and correct for it until it successfully outputs what it feels are the best possible combinations.
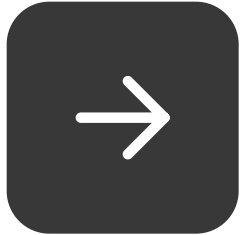
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# Progress so far

- Research done on buses used by KSRTC
- Rough sketches of UI done by hand, ongoing work on making a prototype
- Development started on homepage of Thoroute
- App development started using Node.js as backend
- Frontend development started using HTML5, CSS3, JavaScript and Angular.js (May switch to vue.js mid development)
- Source Code hosted on GitHub (Link provided on homepage)
- Homepage hosted at adithyan.co/thoroute

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# Project Timeline

**23 May 2022**

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**Topic Selection**
Discussion
Completed

**30 May 2022**

○

**Review: 0**
Abstract Creation
Completed

**6 June 2022**

○

**Development**
Frontend
In Progress

**21 June 2022**

○

**Review: 1**
Design
In Progres

**10 July 2022**

○

**Final Review**
Report Submission
Pending

**6 July 2022**

○

**Deployment**
App Deployed
Pending

**5 July 2022**

○

**Backend**
Dev. Complete
Pending

**30 June 2022**

○

**Frontend**
Dev. Complete
In Progress

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# Tools used

Primary IDEs: Visual Studio Code, Jetbrains intelliJ Idea
Languages: HTML, CSS, Javascript
Frameworks: Node.js (Backend), Angular.js/Vue.js (Frontend)
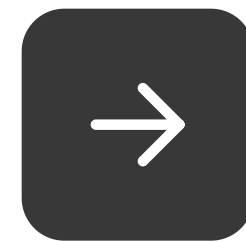Database: MongoDB
Design & Animation: Figma, Adobe After Effects, Adobe Illustrator
Services: Amazon Web Services (Hosting), Namecheap (Domains)

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How will it look?

# The UI

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# Thoroute

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Get Started →

# Login

Username

Password

**Login →**

■ Remember Me!