VGI CHALLENGE

INNOVATING PUBLIC TRANSPORT IN AND AROUND INGOLSTADT

VGI newMIND
MOBILITÄT
INNOVATION
NACHHALTIGKEIT
DIGITALISIERUNG

Technische Hochschule Ingolstadt

A I N I N

Katholische Universität Eichstätt-Ingolstadt

Welcome to the VGI Challenge

Thank you for joining us at the VGI CHALLENGE.
We're very excited about the solutions and ideas you and your team will present us!

You have already chosen your Team and your Challenge at the Kick-Off Event.
The following slides will include all the information you need to successfully prepare your pitch.

Good Luck!

TOPIC 3:
HOW DOES THE VGI-FLEXI MOVE RURAL AREAS?

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TOPIC 3:
HOW DOES THE VGI-FLEXI MOVE RURAL AREAS?

Description:
Since June 2022, on-demand buses have been operating in selected areas of the VGI region around Ingolstadt to efficiently serve the irregular demand in rural regions. The precise data collection of these on-demand buses' travel behavior offers significant opportunities to gain valuable insights and better tailor services to the needs of the rural population of Ingolstadt.

Objective:
Visualization of the spatio-temporal travel behavior of VGI-Flexi users.

Requirements:
Anonymized demand data for an on-demand area will be provided for one month. Using software of your choice (e.g., Python, R), you can first statically identify the most demanded bus stops (e.g., heatmaps) and then dynamically integrate the temporal component (e.g., ShinyApp). Ideally, the Flexi bus will drive on the demanded routes.

TOPIC 3:
HOW DOES THE VGI-FLEXI MOVE RURAL AREAS?

Data:

	A	B	C	F	S	U	X	Y	Z	AA
1	Booking ID	Status	Passenger status	Passengers	Pickup ID	Dropoff ID	Selected Pickup Time	Selected Dropoff Time	Actual Pickup Time	Actual Dropoff Time
2	159690	Validated	Trip completed	1	59	0	01.03.2024 05:30	01.03.2024 06:08	01.03.2024 05:31	01.03.2024 06:00
3	159984	Validated	Trip completed	1	6	0	01.03.2024 05:51	01.03.2024 06:13	01.03.2024 05:52	01.03.2024 06:00
4	159671	Cancelled by client	Cancelled	1	66	38	01.03.2024 06:22	01.03.2024 06:45	01.03.2024 06:28	01.03.2024 06:44
5	165450	Validated	Trip completed	1	57	43	01.03.2024 06:23	01.03.2024 06:55	01.03.2024 06:24	01.03.2024 06:36
6	161946	Validated	Trip completed	1	61	38	01.03.2024 06:24	01.03.2024 06:45	01.03.2024 06:26	01.03.2024 06:38
7	163150	Cancelled by client	Cancelled	1	8	0	01.03.2024 06:32	01.03.2024 06:55	01.03.2024 06:30	01.03.2024 06:39
8	160237	Validated	Trip completed	1	0	63	01.03.2024 06:42	01.03.2024 07:20	01.03.2024 06:40	01.03.2024 07:09
9	166770	Validated	Trip completed	1	7	3	01.03.2024 06:50	01.03.2024 07:07	01.03.2024 06:48	01.03.2024 06:52
10	163214	Cancelled by client	Cancelled	1	30	0	01.03.2024 06:52	01.03.2024 07:18	01.03.2024 06:57	01.03.2024 07:21
11	167029	Validated	Trip completed	2	29	0	01.03.2024 06:59	01.03.2024 07:34	01.03.2024 07:00	01.03.2024 07:25
12	167059	Cancelled by client	Cancelled	1	9	0	01.03.2024 07:12	01.03.2024 07:37	01.03.2024 07:12	01.03.2024 07:24
13	165943	Validated	Trip completed	1	15	0	01.03.2024 07:13	01.03.2024 07:34	01.03.2024 07:15	01.03.2024 07:25
14	162914	Validated	Trip completed	1	70	0	01.03.2024 07:24	01.03.2024 08:10	01.03.2024 07:24	01.03.2024 08:04
15	165653	Validated	Trip completed	2	20	0	01.03.2024 07:48	01.03.2024 08:11	01.03.2024 07:49	01.03.2024 08:04
16	164643	Cancelled by client	Cancelled	2	33	42	01.03.2024 07:50	01.03.2024 08:09	01.03.2024 07:50	01.03.2024 07:56
17	166769	Cancelled by client	Cancelled	1	7	3	01.03.2024 07:52	01.03.2024 08:15	01.03.2024 07:52	01.03.2024 08:02
18	166613	Cancelled by client	Cancelled	1	20	0	01.03.2024 07:58	01.03.2024 08:20	01.03.2024 07:58	01.03.2024 08:07
19	167011	Validated	Trip completed	1	13	0	01.03.2024 07:59	01.03.2024 08:21	01.03.2024 07:54	01.03.2024 08:04
20	166680	Validated	Trip completed	1	0	20	01.03.2024 08:20	01.03.2024 08:50	01.03.2024 08:15	01.03.2024 08:35
21	167131	Validated	Trip completed	4	20	0	01.03.2024 08:22	01.03.2024 09:03	01.03.2024 08:23	01.03.2024 08:52
22	164644	Cancelled by client	Cancelled	1	42	33	01.03.2024 08:27	01.03.2024 08:46	01.03.2024 08:27	01.03.2024 08:33
23	164841	Validated	Trip completed	1	13	0	01.03.2024 08:30	01.03.2024 08:52	01.03.2024 08:23	01.03.2024 08:49
24	166696	Validated	Trip completed	1	1	0	01.03.2024 08:30	01.03.2024 08:51	01.03.2024 08:31	01.03.2024 08:52
25	166606	Validated	Trip completed	1	21	0	01.03.2024 08:34	01.03.2024 08:59	01.03.2024 08:35	01.03.2024 08:49
26	166805	Cancelled by driver	Cancelled	1	20	0	01.03.2024 08:37	01.03.2024 09:00	01.03.2024 08:35	01.03.2024 08:52
27	167124	Cancelled by driver	Cancelled	4	20	0	01.03.2024 08:37	01.03.2024 09:05	01.03.2024 08:35	01.03.2024 08:52
28	167058	Validated	Trip completed	1	28	0	01.03.2024 08:40	01.03.2024 09:03	01.03.2024 08:41	01.03.2024 08:52
29	167088	Validated	Trip completed	1	3	0	01.03.2024 08:45	01.03.2024 09:05	01.03.2024 08:43	01.03.2024 08:49
30	167111	Validated	Trip completed	2	39	0	01.03.2024 09:06	01.03.2024 09:35	01.03.2024 09:09	01.03.2024 09:33

(a) Anonymized trip data

	A	B	C	D	E
1	index	name	district	latitude	longitude
2	0	Eichstätt Stadtbahnhof - Bussteig 3	Eichstätt	48,89351	11,17972
3	1	Blumenberg, Kinderdorfstraße	Blumenberg	48,90034	11,14662
4	2	Harthof	Harthof	48,9013	11,14178
5	3	Wegscheid	Wegscheid	48,90866	11,14468
6	4	Langensallach	Langensallach	48,92567	11,16912
7	5	Workerszell, Sperberslohe	Workerszell	48,933087	11,155597
8	6	Workerszell, Heuweg	Workerszell	48,928087	11,149613
9	7	Workerszell, Lindenstraße	Workerszell	48,92604	11,14936
10	8	Workerszell, Feuerwehrhaus	Workerszell	48,92642545	11,14471089
11	9	Rupertsbuch, An der Leite	Rupertsbuch	48,923537	11,142718
12	10	Rupertsbuch, Kirche	Rupertsbuch	48,9265	11,14045
13	11	Ferdinandsfeld	Ferdinandsfeld	48,936907	11,127955
14	12	Geländer	Geländer	48,944532	11,11368
15	13	Sappenfeld, Waldstraße	Sappenfeld	48,9226443	11,12064686
16	14	Sappenfeld, Feuerwehrhaus	Sappenfeld	48,92084	11,12878
17	15	Birkhof	Birkhof	48,91335	11,13091
18	16	Schernfeld, Sonnenbaum	Schernfeld	48,905008	11,111705
19	17	Schernfeld, Am Gewend	Schernfeld	48,907422	11,107418
20	18	Schernfeld, Walderlebniszentrum	Schernfeld	48,916208	11,099985

(b) Bus stop coordinates

Contact and Data

You will receive the needed data for your challenge along with this presentation in the email. If there are any questions during the workweek regarding your challenge feel free to contact:

Simon Mader (KU)
Simon.mader@ku.de

Workweek

You and your team will be able to work on your challenge starting from the Kick-Off Event until the following Friday, 15. November.
During this time, you can work from wherever you want - but also rooms at the THI will be available to you:

When	Where
09.11.	J201
10.11.	J201
11.11.	D315
12.11.	G117
13.11.	E001
14.11. until 11:25	E001
14.11. from 11:35 until rest of the day	K010

The rooms will be open during the normal THI working hours. Some small refreshments and snacks will be provided. Please consider that there is limited space.

Your Pitch

You will present your solution with a quick pitch at the closing event, 15. November.
Please prepare a Powerpoint presentation that showcases your work –
It can be as creative or detailed as you want.
Just make sure that you can deliver your pitch **in 3 minutes**.

Every group will have a designated time slot on the day of the event. There will be a small time buffer between pitches for connecting your PC with our equipment and get everything ready. Make sure you have a HDMI compatible Laptop.
We will mail you the exact order of the teams pitches the day before the event.

Jury and the Selection Process

After everyone got the chance to present their pitches, our jury will start their selection process and decides who wins the VGI Challenge.

They will consider the following attributes in your pitches:

Innovation

How creative and new is the idea? Do you have a different angle than everyone else?

Complexity

How complex is the solution? How many details were you able to consider?

Usability

Will the VGI be able to implement the solution? How doable is it?

Presentation

How good was the overall pitch?

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The Prices

The total Price Money of 10.000€ will be divided like this:

Second Place
3.000€

First Place
5.000€

Third Place
2.000€

The prices will be split evenly and fairly between all participating team members.

Have fun and good luck!
We will see each other again:
15.11.24 16:00-20:00
at Reimanns, Campus THI

If you have any other questions, feel free to contact us:

Melissa Schultze (AININ)
Melissa.Schultze@ainin.de

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