May 24(Meeting): Sensei give me some little fixes.

May 21 (lab meeting): next week meeting skip. We need to fix the final thesis title.
My plan presentation title was " Toward an efficient Electric Vehicle Charging Place Booking System using multiagent learning"
My mid term presentation title was " Toward an Efficient And Resilient Electric Vehicle Charging Place Allocation Using Multiagent Learning"
My conference paper title is "Toward an Efficient And Resilient Electric Vehicle Charging Place Allocation Using Multiagent Approach"
My tentative thesis title is "Toward an Efficient And Resilient Electric Vehicle Charging Place Allocation Using Multiagent Approach"
College of Informatics, Academic Institute
Shizuoka University
May 20 : Today I corrected minor problems in my paper and added the author's name..
- the electric vehicle(EV)output. -> the electric vehicle (EV) output.
- datset.csv' -> datset.csv
May 18 : In my paper there 3 reviewers give me comments.
Reviewer 1: ----- TEXT:
It's difficult to understand what's being said.
Reviewer 2:TEXT:
This paper proposes a smart charging prediction and automatic booking system for long-distance EV travel using the naive machine learning approach.
In conclusion, this paper is well behind articles currently accepted in IIAI AAI2024. The proposed idea is well known, and the results are not well discussed and conclusions are not meaningful in this paper.
Reviewer 3:TEXT:
This paper proposes a smart charging prediction and automatic booking system for long-distance EV travel.
The authors report the results of the prediction test in this paper.
However, I can not understand the contents of this paper as important information is lacking.
1. What are the inputs for machine learning models?
2. What did you predict using machine learning models?
3. In fig.1 and fig.2, what do the X and Y axes mean?
May 16 : Today I received a paper result.
Paper ID: 1531
Title: Toward an Efficient And Resilient Electric Vehicle Charging Place Allocation Using Multiagent Approach
Author(s): Iftekhar Ahamad, Naoki Fukuta
has been accepted as POSTER PAPER in the 15th International Conference on Smart Computing and Artificial Intelligence and inclusion in the conference proceedings.
Congratulations!
May 15: Today morning i check it was 16:00(JST) but now its noon time its again 23:00(JST)
Next week sensei have some work in S-port so meeting maybe little bit late.
Next next week lab meeting is cancel.

https://www.ai-gakkai.or.jp/jsai2024/openlecture
https://www.ai-gakkai.or.jp/jsai2024/committee
Next next next lab meeting start at 5.45
Hasan Tufik san : sensei said hasan san start his paper with write conclusion.
Hasan san write his conclusion and show it.
Sensei asked qus : What kind of issue right now ?
Hasan san issue :
1-How to write conclusion without doing any result and making model
2-what type of paper he choice
3-How to make mockup.
Rafi san - he try to make mockup, Text based rectangle.
May 13:Today not published. I check my mail many times today. Almost 80-100 times
May 12: Tomorrow will published paper result
May 9: Today I received an email that is some important date
Social gathering.
Date and time: May 31 (Fri) 13:00 start
Location: TKP Garden City Nagoya Ekimae
Daiya Meitetsu Building 3rd Floor, 1-1-17 Meieki, Nishi-ku, Nagoya City, Aichi Prefecture 451-0045
Cost: No participation fee, transportation expenses (with buffet-style meals)
あらためて、内定をお出しさせていただいた皆様に向けて
懇親会を催す運びとなりましたので
ご案内をさせていただきます！
日時：5月31日(金)13:00開始
場所：TKPガーデンシティ名古屋駅前
　　〒451-0045 愛知県名古屋市西区名駅1丁目1−17 ダイヤメイテツビル 3階
費用：参加費無料、交通費支給（ビュッフェ形式の食事つき）
May 6: I have received a job offer from Toyota Boshoku.
April 25: Today 13.55 I give my final interview at Toyota Boshuko in Kariya City. It was quite good HR said the result was public on 6 May after golden week.

April 23(lab meeting):
Sensei told me about final theses paper writing and followed previews of student theses papers.
@ai_database
https://x.com/astonzhangAZ/status/1780990210576441844
https://x.com/seb_ruder/status/1779943539213738055

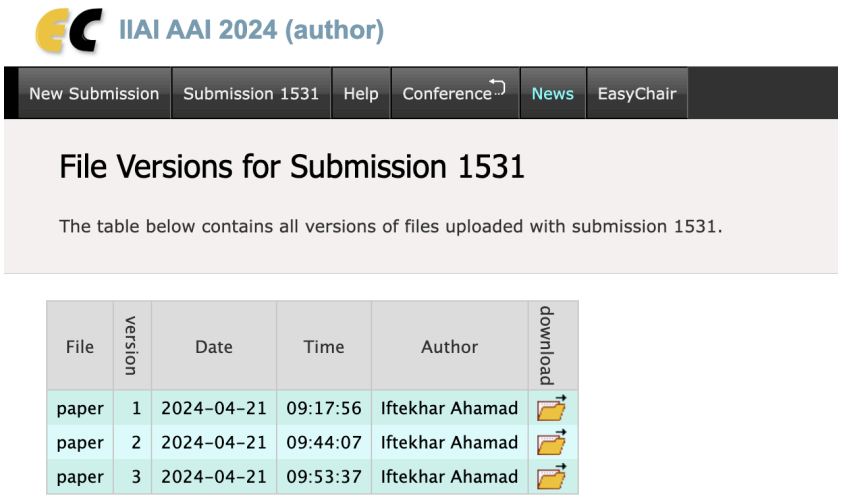
https://iaiai.org/conference/aai2024/

http://dx.doi.org/10.1109/IIAI-AAI-Winter61682.2023.00026
http://dx.doi.org/10.1109/IIAI-AAI-Winter61682.2023.00016

April 21: I learn many things how to submit a paper
In the latex source files, you use begin{figure} ... end{figure} to make figures. you can

change it to begin{figure*} ... end{figure*} to make that figure utilizing the two columns, meaning the full width of the page for a single figure instead of using half the width of the page.
Today finally I submitted 2 page paper in IIAI AAI 2024.

Title	Toward an Efficient And Resilient Electric Vehicle Charging Place Allocation Using Multiagent Approach
Paper:	(Apr 21, 09:53 GMT)(previous versions)
Track	15th International Conference on Smart Computing and Artificial Intelligence
Author keywords	Electric vehicles Multiagent Learning Charge Prediction Optimal Route



File	version	Date	Time	Author	download
paper	1	2024-04-21	09:17:56	Iftekhar Ahamad	
paper	2	2024-04-21	09:44:07	Iftekhar Ahamad	
paper	3	2024-04-21	09:53:37	Iftekhar Ahamad	

April 18: Our weekly meeting (in English) will be held on every Tuesday starting from 14:25, and sometimes will have a break between 15:55-17:45, due to my own schedule reason on that day. Is this OK for you?
April 17: "Deadline extended! Paper submission now due April 20, 2024 (PST) for IIAI conference."
April 14:Today is sunday now 12.03 Am . Saturday Sunday i did full day part time and finally now relaxed.
April 11: Today i am going to attached the initial draft of my research paper for review in slack.

Sensei told me aslo”Why don't you put any sceenshots of mockups/prototype systems?
Sensei told me “would know which part has been derived from where, including where you had some comments and made corrections beforehand.”
April 10: Suma san attach the intial version of her research paper. I just see that in slack now im going to read suma san paper.Today i aslo update my Optimal route selection part
April 9: i am updating my approach part mainly.
The Smart Booking Module here’s a breakdown of how this module
functions and its key components
1)Intelligent Agents
2)Factors Considered for Optimization:a) Available Charging Space,b) Existing Requests,c) Estimated Charging Times: ,d) Distance Between Traveler and Charging Station:
3) Real-Time Recommendations
4) Centralized Serve
April 5: Today is friday.Today i again try to read some paper.
April 1: Sensei experimental setup of lm-studio remote desktop environment which can be accessed from the lab network.
https://www.mdpi.com/1996-1073/16/12/4627-Route Planning for Electric Vehicles Including Driving Style, HVAC, Payload and Battery Health
March 28 :
My Midterm Question:
How to get real strict data for the model train?
Is that reliable?
What is the advantage of your method that the background mentions?
What is your main contribution in my research?
Do you want to use the clock taken or do you want to use it theoretical?
Please add your research originality
Aray sensei
Why do you use the multi-agent system if you the multiple servers how can you manage it?
Your system is very complex. maybe multi agent very helpful

Suma san question:
How to evaluate?
You used LM models where
Why do you ask a question to Ai?
Does your research include how to decide on fairness or
What is the main focus of your research?

Sabbir san

March 26 (lab meeting): Today's lab meeting starts at 4.45 pm. Suma can start using LM Studio.
Suma san give her mid term presentation practice
Qus : Questions
Reg goal setup - what is ur aim and wt u r nt willing model
To relaise it asking LLM is enough? - how can you do the text based input to LLM?
What is the finish line of research?
When we could say you did them?
When could we say they all are integrated in to one?
Some evaluation should be there?
Iftekhar
What kind of qus can be ans in mid term thats is my issue i have
Qus
Why Random forest i used its to old*(base line)
Multi agent*
Too much optimize is good?
If any accident is happed in infront of station *

March 25: My presentation on March 28 from 9.00 to 9.20 Am. The mid-term presentation starts with me I am the first person. And Suma san on 9.20 to 9.40 am .
Sabbir san on 11.40 am to 12.00 pm
March 22: Today is Friday 2nd Jumma in Ramadan. I have part-time in the next 2 days Saturday and Sunday.
March 19 (Lab meeting): The next meeting time will be changed. it will start at 4.45 pm. March 28 maybe mid-term presentation.
https://iaiai.org/conference/aai2024/
Full/Short/Poster Paper Submission due April 15 (PST), 2024
Notification of acceptance/rejection: May 10, 2024
Why mid-term presentation?
The professor will check if there are any critical. Before the final presentation, if any reviewer rejects to sing then it is postponed.
March 18: Tomorrow I have an online job interview ES submitting date. Today I start making ES and after I finish I will start making Mid-term PPTs again. Today morning at 9 am I have dental treatment 2nd time.
March 17: Today I tried to run some code for charging prediction in Google Collab. And run the data set.

March 16: I make some slides of ppt for mid-term. Sensei said to present details about the research so I focused in my ppt about it. I try to focus more on details and I am making PPT based on it.

March 14: Today is our 4 Ramadan.Me Sabbir san and Toufik san Rafi san and around 10-12

people we eat together in kaikan 1 2nd floor common space.

March 12: In this month last week we had a mid-term presentation. So I need to make ppt for it. Today I started to make PPT.
March 11: Today our 1st Ramadan.

March 5 (Lab meeting): One Tuesday have an exam on campus. Don't come to university.26 Tuesday mid-term presentation.
Sum are willing about novelty point. Sensei said theregreatrprofessorsessor in filedThen Sensei said Are Suma San trying to read paper?.sensei said one some ite it gives trouble. Why? Because when we see the tech there, we can't use those techniques.When you fonature'safeelingseling then mitecreatesreate troubles.Then you read in paper which6 its mean are the read paper in 10 years ago.
-What is the goal? Whemadee made mistakes about goal s etup, planning about intermedresultsesult and getting some hfrom ints other professIt
-It's made some mistake mid-term term it's welcome.
-if hide a mistake in its goes opposite directions.
-presenting details about the research is important. The superset the t of the plan presentation is not good enough. how you can explain what you actually things going to do.
-Prof. Are not asking to get results but rather showing details about what you are willing to do and what actually did.

My current issue is I am thinking about how I can create a new mockup. And how my ideas can be made in mockup.

March 4: Today RITIK san is back in Japan. Afternoon 4 pm I will meet with Ritik san.
Today I made one mock for EV predictionction.after a long time thinking I did it.

March 3: I mailed one company about may i give my Web test in English they replied today yes I can give a Web test in English. They told me the Interview would be Japanese but I am an international student that's why I can speak in mixed. The last day of attending WEB TEST is 6 March 11.55 pm.

March 2: Yesterday many company Es. So I search for some company to apply to. Today I filled up 1 company ES. Okamura sensei helped me to create ES. It's a very hard time start for me.

Feb 29: Today is Thursday 2024. once-in-every-four-year event.

Feb 27 (2024): (Lab meeting): Mid-term reg 8th march
Next- next week lan meeting may be canceled.
Sabbi san: Sabbircann makes simulations in task allocations. Sabbir San successfully runs some code.

The code assigns two moveable objects that have fixed positions.here code runs very smoothly without collision.
Sabbir San's term title is “Parallel task allocation in the multi-robot environment under uncertainty based on auction mechanism”

For my simulation, I need to code for range prediction. I am facing some issues with making this kind of code and I tried to find this kind of lode. i think my next step is range prediction but it's not correct. after my range prediction, I will try to do the best CS selection step. This is my thinking and I will try but I am not sure if I will be successful or not. Maybe I may have another other issues but I do not clearly understand it.

“Toward an Efficient Electric Vehicle Charging Place Booking System using Multiagent Learning”
This is the title of my paper in preparation for the international conference.

My plan presentation title was “ Toward an efficient Electric Vehicle Charging Place Booking System using multiagent learning”
That I am doingmay bee somewhat more than so sensei told me to update my title. Here are the possible ones is the “Efficient” keyword. And another one is the “booking system”. Robust, Resilient,

Efficient and resilient
The quickest way to update the term "efficient" is to substitute "efficiwitht" to "efficient and resilient".
“Allocation”
The quickest way to update the term “booking system” is to substitute “booking system” to “Allocation”.

When we apply the above two changes, the title will be: “Toward an efficient and resilient electric vehicle charging place allocation using multiagent learning”I use the keyword multiagent learning
but it did not appear in the list of issues in my mind.
In the range prediction part there is not specific use of multi-agent but after the other part maybe it will be used.
The range prediction part here does not think about of multi-agent learning system.

Feb 26(2024): For range prediction
Here like parameter 1, parameter 2, parameter 3, and parameter 4 then its goes to Machine Learning Analytics after that its range is predicted (EV battery and Cloud EV status)
—Simulation
I tried to learn some code and other things about how I got range predictions. I try to run code and I try to make and find code for range prediction.

Feb 23(2024) : I try to find the data set in a few days. And today I got some data from kaggle.com. This data have
The data set name is “Electrical_vehicle_dataset.csv”
Rated Power (W)
Max Power(W)
Top Speed(kmph)
Battery Capacity(kwh)
Charging Time(Hrs)
Range(km)

Feb 21(2024): Next Sunday have an exam so don't have permission to go to university.
Suma san : suma san think about simulations. And she noted down research questions.

Feb 19: I try to Python implementation of the EV range predictor and route planning simulator. The range predictor is built using ML and the simulator plans optimal routes for a given source and destination using the algorithm. The model keeps track of all the details of the charging stations in a centralized real-time database
Feb 17: Today I saw some papers about EV distance prediction and simulations.

Feb 15: Today morning at 11.15 I visited the dental clinic for my 1st treatment day next treatment date is March 18. The doctor is excellent and speaks good English.

Feb 13(lab meeting): Last week and this week I tried to collect some data sets for simulation in Google Collab and I tried to create a small code to run. but I failed to to last week.In this week am able to run a small code and I found a small data set and it run successfully its i try to learn and understand about simulation.In now I'm facing trouble creating some code and how can i get data for simulation That is the issue i face now.last 3 weeks im not write my note because i think if i write unsuccess full think thats not need to write.i think if i write failure in note thats not good but if i write what kind of failure i face and what the issues of that failure its maybe best think to solve issues next time.And it also abidance what i tired do those days.in those days attractive small successes in finding some code and data.

Ihsan san : The research discussion with Iftekhar, so the from the shared screen, we will start from the research summary. He said that the meeting was started from the research summary and finding some conference for submitting the paper that he needs. Sensei does not see any effort from the research notes, and Ifetekhar said that he had some difficulties from the job hunting activities, such as the web test or SPI and also finding some companies. Sensei said that at least please also write those things to be the written in the research notes, and yeah I think it is also important even it is not related to the research. Sensei said, okay we will try to write from now but in 3 weeks with no research notes, it is not a short times.

Iftekhar said it was not okay, but in last moment it was okay with not taking the research notes. Actually you have spent some times on thinking on the research but why you were not writing something onto your research not. Sensei did not ask him about why not spending your time on

the research. Iftekhar said actually have spent some thinking on to the research by trialing. Sensei said that he might has difficulty on the research note writing. He said he did not have physical difficulty on writing the research notes, but it is not about the physically, but maybe it is in the mind.

He was feeling he made small progress in the research because the effort that he made was limited to some failure on searching and trialing some codes on the path and distance prediction, and then he failed to write this activities into the research notes. Research notes is not about the achievement but all the things, if we did not write our failures, we might get into the same pitfall in the near future. The success and the achievement are for the research paper as a result or contribution that you made, but not the all research journey you have made. So this journey was the one that needs to be taken into the research notes.

Suma san : Iftekhar san felt that what he did in those days(3 weeks) is not good enough to be noted into research notes.
Sabbir san : In his research note he feel that he is not doing good enough that's why he hasitate to write this thing into his research note.

Research note is not only for write good and success think its also write about what wrong and what going in current conditions .what difficulties face every days thats also need to write in notes.I felt hesitate to write in failure in notes because in my mind said to unsuccess think its shame so no need to write i believe my mind but its totally wrong.some times dont go with feeling.Last 3 weeks to fail to fight with my feeling.But i try to do many work but my deep mind said its nothing and i fail to fight.But now i understand its also useful for understanding how to fight with deep mind.those 3 weeks i effectively use to fight with feelings.

January 23(lab meeting):
Suma san: Cerifly her researcher question, she plans to do a preliminary simulation.
https://iaiai.org/conference/aai2024/
Full/Short/Poster Paper Submission due April 15 (PST), 2024

https://ijcai24.org/call-for-workshops/

January 22 :
Research Question:
Can we create a system that predicts/decides the best/optimal route for long-distance traveling using Electric Vehicles based on distance, charging stations, and charging duration to provide convenience and save traveling time, all before we start our journey?"?
January 21:
What we want to do?
What to Do: Creating a System that predicts (decides) the optimal route for EV for long-distance Travelling (based on distance/time and charging stations)

Why to Do: Optimizing route can provide convenience and save time for travelers (drivers)

Create a system for long trips in electric vehicles that predicts how far you can go, finds the best charging stations, and plans the most efficient route, all before you start your journey.
January 20: last lab meeting sensei told me to find a research question
What we want to do?
Why we want to do?

January 16(lab meeting): The mid-term presentation will be at the end of March date is not definite now.
Today sensei asked me about the current situation of my research. I tired to want my goal but sensei said goal is not the issue and then sensei talked about my typing speed or practices After that sensei told ihsan san to share his note and Ihsan san shared passed discussion. And last sensei told me my goal and what is my research qus . what kind of contribution i can do for society or this field. .what we want to do?
Why we want to do ?

Ihsan san: So Sensei tried to remind him again about what kind of issues. Then he tried again with the will or just some goals that he wanted to have. Sensei said goal was not an issue. Sensei attach the issue to the limited research note Iftekhar had with the limitation of typing speed skills if he thought that he had issue to writing his notes while in the meeting.

So, Sensei recommended him to also practice his skill on typing with the online typing skill test or similar platform.

So, Sensei remind him about the research question. What kind of research question he has updated in his research paper draft? What kind of contribution that he can give to the society or the field that had the problem.
If you are trying to think about how to do, you will forget the essence of what to do and why to do.

January 8: Tomorrow we have a cricket match against some Sri Lankan people who work in Hamamatsu and some are students of language school. That's why we buy 3 cricket balls.
January 2: Tonight I start to write my first snow skiing experience that happened yesterday. We visited Fujiten Snow Resort. And I experienced that skiing is very hard. I saw many videos i think that is easy but it's very hard.
January 1: Happy New Year
December 19(Lab meeting):
Today is the final Lab meeting in 2023. Today sensei asked lab members about health conditions almost everyone is a little bit sick because of the weather. Suma san discusses simulations and shows single-car parking simulations.

December 17: Today is a very cold day and very strong wind outside. It's 5 degrees outside in the evening time. Now it's 10 pm and outside is 2 degrees and my phone is showing me it feels like -2 degrees. the wind is making it feel colder.

December 12(Lab meeting):
December 11: Finally I completed Winf2023 That is my first and that is a very good experience.
December 10: Today I completed my poster and that is my final poster

December 5: Sabbir San gives his demo presentation for iiai conference.

December 4: Today I finished my poster presentation.

November 28(lab meeting):Poster Session 2B 12/10 (Sun) 13:10-14:10
Common 51 (5th floor)
Suma san: 2B-11 “Toward an Efficient Dynamic Path Planning utilizing Fairness on Autonomous Vehicle Parking”

DUDDELA SUMA SAATHVIKA (Shizuoka University), NAOKI FUKUTA (Shizuoka University)

My: 2B-18 “A Preliminary Approach on an Efficient Electric Vehicle Charging Place Booking System using Multiagent Learning”

Ahamad Iftekhar (Shizuoka University), Naoki Fukuta (Shizuoka University)

I am not sure about what kind of issues i have now and i am a little worried about my upcoming poster presentation.

November 26:Today wrote my poster presentation PROPOSED APPROACH and I am confused about whether my poster presentation writing way is correct way or not. I added a figure to the poster.

November 24:Yesterday I visited Fuji-san first time. That is a very beautiful place
November 21(lab Meeting): 23 November national holiday, Reg WINF The deadline for presentation applications and paper submissions has been extended to Wednesday, November 1st.
Poster size 8.0

November 18: We are planning to Visit Fuji this Monday
November 14:(lab meeting)

Sensei told them that the beginning a little difficult and sensei gave (typing.io) and (sushida.net) to upgrade their typing speed. Sensei tried to practice Tufik san and Rafi san how to write it. Sensei asked Ihsan San to show the research note. Sensei explains about importance of research notes.
Sensei asked Rafi san and Tufik san about the research note. Both of them start to write their conclusion part in Letax.

Registration for participation in WINF

https://sites.google.com/view/winf2023/registration?authuser=0
Suma sensei cannot join today because she has some health issue

November 13:Today is very cold.
November 12: Today is the university festival.
November 7:(Lab meeting) International Semantic Web Conference(ISWC)
https://www.ifaamas.org/

November 1:Title: "A Preliminary Approach on an Efficient Electric Vehicle Charging Place Booking System using Multiagent Learning"

Abstract: In this presentation, we propose an initial idea for our smart charging prediction and automatic booking system for long-distance EV travel using multi-agent learning. This system can enhance EV performance by optimizing waiting times, cost-efficiency, and time-saving measures.

October 24:(Lab meeting)
Today sensei told some rules and regulations about lab new members
Winf 2023 date extended it now 2023-11-1
Domestic - https://sites.google.com/view/winf2023/

October 23:In the last lab meeting I asked a few questions about how I write a literature review then sensei give some advice and said to collate 20-25 papers. and sensei told me not to try to find instant solutions.
October 22 : multi-energy complementary electric vehicle charging station optimization planning
Location Planning: This entails a thorough evaluation of the best sites for charging stations, taking into account elements like proximity to areas with high demand, the capacity of the grid, and minimizing capital expenditure while ensuring easy access for electric vehicle (EV) users.
Charger Configuration: To decide the quantity and characteristics of charging equipment at each station, a thorough analysis is required. In order to effectively meet the varied needs of EV consumers, this may include factors like the choice of Level 1, Level 2, or DC fast chargers.
Load management: Specifically during periods of peak demand, load management refers to the systematic balancing of power consumption within the electrical grid. This covers methods for reducing the possibility of grid overloads brought on by several charging stations operating at once.
Energy Source Integration: A crucial technological aspect of the charging station infrastructure is the integration of renewable energy sources, such as photovoltaic solar panels and wind

turbines. By utilising clean energy, it seeks to reduce the carbon footprint of the stations, in line with sustainability objectives.
User Demand Forecasting: In order to project the expected demand for different billing services, predictive models and algorithms are used in this component. It makes it possible to dynamically allocate station resources to meet user needs, maximising operational effectiveness.

October 20 : (Today lab meeting)
Today is Rafi San first lab meeting and he joined us,
Suzuki san will come today evening and move student room 2. Sensei said Ishan san showed his notes to understand how to write notes and Sensei said to write daily activities. Sensei advised us to use the cloud-based notes apps.

October 18: I started writing the paper and I made a new mockup
I started everything, part-time, research, and other activities after a 1-month vacation.
Based on my paper fig
Each charging station accommodates v (EVs), each with its distinct charging time. The current charging condition involves assessing the number of EVs parked at the station and their individual charging durations.
Types of EV models upon arrival: This refers to the specific makes and models of electric vehicles that are present when they arrive at a charging station. It's important to identify and categorize the different types to understand the charging requirements and compatibility.
Charging time for the EVs arriving: This signifies the amount of time required for each arriving electric vehicle to complete its charging process.
The volume of incoming EVs: This metric quantifies the number of electric vehicles that are arriving at a given point in time. Analyzing this parameter is essential for managing charging station capacity and predicting demand.
Arrival times for the incoming EVs: This involves recording the precise time at which each electric vehicle arrives at the charging station. This data is valuable for assessing traffic patterns and optimizing station operation.
October 15:Last last lab meeting i asked Sensei after my plan presentation where i started writing sensei said from the conclusion
I said now what do I need to do what will be my next step?
Sensei said the next step will not be clear in research. if I find next step in some paper then what my contribution

October 11:Yesterday I came to Japan,
October 3 (lab meeting): Today new member joined Hasan Tufik.
In the last few lab meetings, we discussed plan presentation questions. We got some advice and my side what is next step and how I start writing in the paper its in the conclusion part or before the conclusion .and now I started to find a method
Write in the conclusion part

If we try to find any method to solve some things that are not researched .because it already have. we try to do something that's new. after I got an answer to my question I was just confused about how i can solve my research ?
In my plan presentation i dont have idea about my research question?
I need to setup research qus

October 2:

26 September (Lab meeting):today my net connection was very poor i am not able to join properly.sensei said make my connection good in next lab meeting.

20 September: today i am going to tour and I will be back on 24 September. The place's name is Bandarban. That is the most beautiful place in Bangladesh.
19 September: today is 1st lab meeting after the plan presentation.

5 September: Presentation quse:
What will you implement is there any programming?
Do you know any software for implementation?
What to minimize in his presentation?
what going to optimize in this research?
Framework for method vs framework for implementation . What you want to try in the framework?
#Multiple object optimization part is the thing on which you are working
Possible assumption which you will take and dynamic change?
Don't try to include all dynamic change.Its hard to do so.

29 August(lab meeting day): 30 August 1.10 pm My and Suma san presentation
First need to know about the reviewer, and also know the mail to send the presentation.

27 August: Problem statement: The issue happens when people charge their electric cars at home.

•This can stress the sockets and cause dangers due to too much power used.

•It's also slow and costly to charge at home.

•Waiting for public charging spots takes time.

•We need a better and cheaper way to charge electric cars using what we have.

26 August: Today I started making ppt
25 august (Night):In Scenario 1, imagine you're driving your electric car from one place to another, and you have only 45% charge left. You might need to charge your car on the way, but you're not sure if there will be an available spot at a charging station. That's

where our solution comes in. We help you find the quickest route to your destination while making sure you have a charging spot booked. After we figure out the best route, we give you a list of charging stations, and we make sure the station with the shortest wait time for a spot is at the top. We use multiagent reinforcement learning techniques to solve this challenge and make electric car journey smoother.

22 August: Lab meeting day

Ritik san finally submit his thesis

My and suma san have to give 30 and 31 both date

19 September our lab meeting

End of September join new member

Sabbir san:

He try to create ppt for the plan presentation. He asked about his paper was sufficient for the plan presentation.

Qus: Which type of result expect from some simulation for sabbir san simulation?

My part:

At first , discussion about my misunderstanding about the schedule

-then regarding white space after full stop

-then we discourse regarding comments in the paper

-

21 August: Research question

1. What impact does empty EV battery have on station traffic?

Answer: When EV batteries are empty, drivers need to recharge them, causing more vehicles to use charging stations. This can lead to longer lines and more congestion at the stations.

2.EVs sometimes fail to match the charging spot.

Answer: Yes, sometimes electric vehicles can't find an available charging spot at a station. This can be might cause delays.

3. Does temperature affect EV battery performance and range?

Answer: Maybe, extreme temperatures, like very hot or cold weather, can impact how far an EV can go on a single charge and how well the battery works overall.

4. What's the impact of fast-charging infrastructure on long-distance EV travel?

Answer: Fast-charging stations can be important for long-distance EV travel because they allow drivers to recharge quickly and continue their journey without long breaks.

5. How do EVs differ between urban and rural areas?

Answer: EVs might be used differently in urban and rural areas. In cities, they might be more Ev station to shorter distances, while in rural areas, where distances are longer, planning charging stops becomes more important.

6. What's the current state of solid-state battery development for EVs?

Answer:

7. What factors think to range anxiety EV buyers?

Answer: Range anxiety is the worry that an EV might run out of power before reaching a charging station. Factors like battery capacity, charging infrastructure, and driving habits can influence this anxiety.

8. Can EVs reduce urban air pollution and improve air quality?

Answer: Yes, electric vehicles produce zero cardon emissions, which can help reduce air pollution in urban areas and improve overall air quality.

9.How do different charging speeds and power levels impact EV battery degradation over time?

Answer:

New qusetion

10.What are the potential economic impacts of a fully electrified transportation sector on jobs and industries?

Answer : Shift to electric transportation could lead to changes in jobs and industries, such as a decline in jobs related to traditional gasoline vehicles.

11.: Can really hot or cold weather change how far an electric car can go and how well it works?

Answer: Yes, extreme weather conditions can affect an electric car's performance and range. Very hot or cold weather might make the car work differently and go a shorter distance on a single charge.

12.Are electric cars in cities and the countryside different from each other in certain ways?

13.How are researchers trying to make new kinds of batteries for electric cars that might be better?

14.What makes people worried they might run out of power when they drive electric cars?

15.Can electric cars help make the air cleaner in cities, and how does that work?

16.If all the cars that use gas become electric, how could that affect jobs and different businesses?

20 august:

In Figure 1, electric vehicles (EVs) transmit their requests to a central server. These requests from all the EVs are then collected and sent to the main server. The main server examines the information in these requests to decide which electric charging stations would be most suitable and comfortable for the electric vehicles. It's like the server is making sure each EV goes to the charging station that works best for it.

In Figure 2, you can see a situation where one electric car’s battery has run out of power completely. This has caused a traffic jam at the charging station because the car is unable to move, blocking other cars from accessing the charging spots.As a result, the flow of cars at the station is disrupted, and it’s causing a delay for other drivers who want to charge their vehicles.

Old introduction : Climate change, which is mostly caused by greenhouse gas (GHG) emissions, has long been a major issue. If no more steps are made to limit GHG emissions, global warming is expected to reach 2 degrees Celsius over pre-industrial levels \cite{first}. In 2016, transportation accounted for over 25% of total world CO2 emissions. While energy and fuel use have a significant influence on climate change, energy usage and production also confront significant hurdles. According to important world energy figures, the global transportation system's energy consumption climbed from 23% to 28% in 2012 [2]. As a result, the notion of green transportation is gaining traction, which refers to a system of urban transportation that is convenient, safe, efficient, low-polluting, and diverse. Green transportation is one of the most important strategies for combating air pollution, decreasing congestion, and addressing the fuel issue, thanks to advancements in communication and technology.
Among all green transportation choices, such as shared mobility, e-bike, e-scooter, electric vehicle (EV), and plug-in hybrid electric electric vehicle (PHEV), e-bike, e-scooter, electric vehicle (EV), and plug-in hybrid electric vehicle (PHEV) is an appealing choice to ease the issues [3]. Aside from the benefits of EVs in terms of energy security and environmental sustainability, EVs provide considerable cost savings and fuel efficiency to consumers. As a result of these factors, the electric vehicle market has been a commercial success in recent years. Many states and other organizations have also established laws and goals to encourage the use of electric vehicles, further fueling the surge.
For more than a century, we've used gasoline to refill our automobiles. There are several types of gasoline to select from, including ordinary, mid-grade, and premium gasoline, as well as diesel. The refueling procedure, on the other hand, is quite simple, everyone knows how to do it, and it takes approximately five minutes to complete. Refueling—the act of recharging—isn't quite as straightforward or quick with electric automobiles. There are several causes for this, including the fact that each electric car can handle various levels of electricity. Different types of connections are also utilized, but the most essential distinction is that different levels of EV charging affect
how long it takes to charge an EV [4]. Electric car drivers plug in anytime they park and return to a vehicle with a fuller battery than when they left it, which is different from filling up a petrol/diesel vehicle with fuel. It's essential to consider "where do I park the most frequently?" and seek for charging stations located in these areas. For the most part, this entails going home, then to work, and finally to your other locations. You may occasionally need to drive further than the range of your battery, necessitating the use of a high-powered quick charger. Electric vehicles may be charged at home or at public charging stations it can take as little as 30 minutes to fully charge an automobile, or as much as half a day. The length of time necessary may be affected by the size of your battery and the speed with which it charges.

8 August: next week lab meeting skip
Room number 22 final theses for ritik san
Ritik san persent his final presentation and he try to explain it
Suma san-she try to find one keyword and sensei clear about it
Research is not about problem solven

Then look research paper first set a goal
Today My part:
7 Ausust: what is counter question and how can create counter question?
Counter question is just create question to question or other thinks?

6 August: In the last lab meeting sensei said to make a list of the research question here is the question in my mind
1. What impact does empty EV battery have on station traffic?
Answer
2.EVs sometimes fail to match the charging spot.
3. Does temperature affect EV battery performance and range?
4. What's the impact of fast-charging infrastructure on long-distance EV travel?
5. How do EVs differ between urban and rural areas?
6. What's the current state of solid-state battery development for EVs?
7. What factors think to range anxiety EV buyers?
8. Can EVs reduce urban air pollution and improve air quality?
9.How do different charging speeds and power levels impact EV battery degradation over time?
10.What are the potential economic impacts of a fully electrified transportation sector on jobs and industries?
3 August: I updated my paper about then one car battery being fully empty and create traffic on station
In this case where one electric car's battery has run out of power completely. This has caused a traffic jam at the charging station because the car is unable to move, blocking other cars from accessing the charging spots. As a result, the flow of cars at the station is disrupted, and it's causing a delay for other drivers who want to charge their vehicles.

1 August (lab Meeting):
Ritik san physical condition not good.
Sabbir san-
Sensei : What kind of issue do you have now?
Sensei : Why you think so?
Sabbir san : last week of semester thats why he have assignment
We dont know what would be best one
My part:He said that last week there were a problem on write up some research note, and Sensei recommended him to make a list of questions, then the counter question for it, also about what can we do now. Sensei said when we were making a list, the number of the list would be not only 2 or 3 but would be more than dozen and might be hundreds.

31 july :I feel nervos today about presentation.late see what happened today evening.this week is very busy week many assignment and presentation i have its very much hard week
For research ;
Last week sensei said some question
-what can we do?
-then what can we do now?
-make a list about what we need to do
So i have think about make a list thats we need to do

In research qusetion
1.if any car book the place but when he arrived and wait for any reason
2.if any car battery fully empty and he create traffic in station
3.if car book the place but car doesnot support the charging spot
4.if price is little high he donot accept this price
5.

30 july : Today i booked my tickets.We have group presentation in tomorrow software design my part object diagram .

July 28 : Today i got sensei permission but i need to buy tickets 1 week later plan presentation.And now i am complete my cognitive science assignment is already i did 30% now i will finish it

July 25(lab meeting): Next week Ritik san theses submission
-last year 100% of people faced problems submitting the final theses
-plan presentation 30 or 31 August
-if miss the chance to plan the presentation then maybe its 6-month extension
-September 12 date of graduation ceremony
-last week new member join our lab
-October new semester start
-sensei question to ritik san - What he have learned in these 2 years
-what we believe it's not equbalance what is confirmed
-Sometimes we believe that our believe is right but it's not so
-Sensei said to ritik san - Distinguish your belief from confirmed facts or validated things!
-We are human beings sometimes it can happen
-in research, we do not know what kind of things do next because it is rearch
-in research we don’t know next step,
-the issue in i have now i dont know what would be next step to do

-we are doing research we dont know clearly what happened next
-1st think is clarify
-2nd counter argument,
-Counter argument question against 2nd counter argument
- next setup goal,
-what can we do?
-then what can we do now?
-make a list about what we need to do
-now what step is next step that is very confusing
-and aslo fight against natural feeling
-next step doing parallel
-natural feeling sometimes going in infinite loop
-how sensei know perfect my feeling now?
-
July 24: today i try to add my mockup pdf in Overleaf
-last i face many problem and after many time try i add pdf in Overleaf
-wow i did this after 40 min try
July 22: Today I create an account in Rakunabi 2025
-Last lab meeting i create a mockup in PowerPoint
- i make 2 mockup 1st mockup is based on just ev charging request booking system
-2nd mockup create based on if any vehicles charge fully empty then what happened
-main problem here is empty ev car create traffic jam

July 18(Lab meeting)-
-last week's international conference
-next week's class is on demand so lab meetings will be continuous with no break
-covid incidence increasing nowadays
-need to be careful about this incident
Suma san-
-did take a picture conference?
-we have seen some pictures
-they visited osake factory
-And also the BBQ party
-Suma san shared what questions she face at the conference
-how we can choose rights one from the number of optimal solutions?
-When we use 2 or more MOO
Suma san Research title" Towerd Appling an Improved Path Planning Considering Fairness on Autonomous Car parking"
Sabbir San-
-Need to submit our Title 28 July
-If fail main one then what need to do
-Sabbir san show mockup
Tentative Research Title,

Parallel Task Allocation in Multi-robot environment under Uncertainty based on Auction Mechanism

My part

-If any car stay overstaying and it will be a reason of another car empty battery

- Toward an Efficient Electric Vehicle Charging Framework using Multiagent Learning

Toward an Efficient Electric Vehicle Charging Framework recommendation system using Multiagent Learning

-Toward an Efficient Electric Vehicle Charging place booking system using Multiagent Learning

–Today mockup add my paper *

-

July 17

-today is a holiday and a very sunny day

-i want to work in ev vehicles station recommendation system

-can ev car station recommendation work like as youtube or movie recommendation system?

-like as if buy a iPhone then its automatically recommen to buy apple earphone

-recommendation system process 4 phares

-colletion

-storing

-analyzing

-filtering

16 july try to write everthing you do in the day.

- why he is worring about to put his updayed version in the slack.
- iftekar answer is because he have updated a little bit.
- dont follow the feeling and try to fight your fellings.
- plan presentation is approching if he will fail in deciding the tile then the masted can get postpond.
- sensei question is how he is spending time other than doing assignment.

12 july

- make notes, you cant remember these things for the the next year.
- research notes is the evidence that you have given the effort in the research otherwise your research can get extended
- every moment sensei asked about the notes but he alwasys forget to take why?
- sensei dont ask to prepare the progress in the notes just write the memos and the problems in the notes.

8 july
-Today ritik san and suma san present poster final virson and pratic presentation many time
-firstly they think and spake only 1 min and several time they do that
-Human so forget important thing so need to note everything
- do he remember what he is worrying about his research.
- iftekar answer is hard to remember it clearly.
- sensei said that is why it is important to write the notes.
- just write what you are doing or spending the time in the research notes and write your worries in the noted so
try to write everthing you do in the day.
- why he is worring about to put his updayed version in the slack.
- iftekar answer is because he have updated a little bit.
- dont follow the feeling and try to fight your fellings.
- plan presentation is approching if he will fail in deciding the tile then the masted can get postpond.
- sensei question is how he is spending time other than doing assignment.

4 july : This week i have some assignment submition
-last late of information resource in 6 july and cognitive science 3rd assignment last date of submission is
2 july :
-we work the real-time charging station recommendation problem
- recommendation of a charging station for ev although the decision is made immediately because of the action take fast before charge drops below
-we also need to think about traffic flow and condition ev charging stations located near the road,

June 27:
-30 august plan presentation
-plan presentation need to show my plan about research
-september graduation ceremony ritik san
-
My own idea about the conclusion is if we want to do solve ev recommendation like as real time current situation but we don't know how to solve this or do this

-need of find what kind of problem can be face ev recommendation

June 24:
-today I practice typing speed improve
- today I order dji drone
-

June 20:
-final presentation professors are different
-30/31 August our plan presentation
-Title needs to be decided
-Fight against natural feeling
-it's important to record how many hours spent on research in week

Jun 19: next July 2 I have jlpt N5 exam
Jun 17: Today I try to improve my typing skills I trying to type 10 work in a minute in the online platform

Jun 13: Today is our weekly lab meeting
-Today sensei share one link about suma san and ritik san about poster presentation
-2nd August is the deadline for submission for ritik san
-hints about the poster presentation
-how to prepare the prototype
-summary of the related works with citations.
- I need to reach 40 words in a minute.

Jun 12: Each agent observes the charging station's current state, receives charging requests from travelers, and provides real-time recommendations based on various factors such as available charging space, existing requests, estimated charging times, and distance between the traveler and the charging station.

Agent Observations:
Each agent monitors the charging station it is assigned to.
The agent collects observations regarding the current state of the charging station, including the number of available charging spaces and the number of existing charging requests

Real-Time Data Transfer:

Upon receiving a charging request from a traveler, the agent initiates the data transfer process.
The agent gathers relevant information to make an informed recommendation.
The agent collects data on the current situation, including available charging spaces and the number of existing charging requests.
The agent also considers the charging status of ongoing EVs and estimates the time required for them to finish charging.
Additionally, the agent determines the distance between the traveler and the charging station.
Recommendation Process:
Based on the collected data, the agent generates a recommendation for the traveler.
The recommendation may include suggesting a charging station with available space or providing an estimated waiting time.
The agent takes into account the distance between the traveler and the charging station to optimize the recommendation.
The recommendation is transferred back to the traveler in real-time, ensuring prompt and up-to-date information.

Jun 10 : EV charging recommendation task how to solve and long-term goals .this problem can solve using the marl task and how?
Some important things for ev charging recommendation problem
1. Charging request,
2. charging wait time and travel time from reach the target charging station location,
3.Charging ports are available or not for traveler car and charging cost.
4. An important one is the ratio of the number of EV vehicle charging requests
After considering all of the sets then create ev charging recommendations

Agent: agent observes each ev charging station individual agent. Each agent will make transfer data in real-time.

After giving a charging request from traveller, agenet observation current available charging space and number of requests already have
Then agent observation current suiatiuon current charging request,next ev vehicles how much time take to finish charging and distance traveller to ev charging station every things observe aganet after agenet recommended .

May 28 : EV charging recommendation problem, several crucial factors come into play:

1. Charging Request: The initial step involves assessing the charging requests received from electric vehicle (EV) owners or operators. These requests serve as the basis for further analysis and recommendation generation.
2. Charging Wait Time and Travel Time: To provide effective recommendations, it is essential to consider the estimated wait time at the charging station and the travel time required for reaching the designated charging station location. These factors contribute to the overall convenience and feasibility of the charging process.
3. Charging Port Availability and Charging Cost: Another critical aspect is determining the availability of charging ports at the desired charging station for the traveler's car. Additionally, considering the charging cost associated with each station assists in making cost-effective recommendations.
4. The ratio of EV Vehicle Charging Requests: The ratio of the number of EV vehicle charging requests is a significant metric to consider. Analyzing this ratio allows for a better understanding of the demand and usage patterns, which aids in generating optimal charging recommendations.

May 13: To solve the scheduling problem of EV charging, this paper first presents a global-optimization-oriented method based on the existing work, called the Earliest Completion Charging (EFC) algorithm

By this algorithm, the average velocity of the traffic network, the queuing situation of charging stations, and the distance between an EV and a charging station are considered. Since the distance of an EV to a charging pile is assumed the same as to the corresponding charging station.

Paper: Optimal scheduling of electric vehicle charging operations considering real-time traffic condition and travel distance

Yisheng An a
, Yuxin Gao a
, Naiqi Wu b,∗
, Jiawei Zhu a,∗
, Hongzhang Li a
, Jinhui Yang

May 11: Q-learning algorithm

In Q-learning, the action-value function associated to each state–action pair is updated at every step, complying with the following rule:

$Q(St, At) \leftarrow Q(St, At) + \alpha[Rt+1 + \gamma$ max

$a\ Q(St+1, a)$
$- Q(St, At)]$ (4)
where St is the state at time t, At is the action performed at time t, $Q(St, At)$ is action-value function at time t, γ is the discount factor and α is the learning rate. The learning rate α determines to what extent newly acquired information overrides old information. In reinforcement learning problems, often happens that states encountered by the agent have never been experienced before. It is then necessary to generalize from previously experienced states to ones that have never been seen (Sutton & Barto, 2014-2015).
Paper: Power output optimization of electric vehicles smart charging hubs using deep reinforcement learning | Elsevier Enhanced Reader
First, a clustering algorithm has been used to identify pools of electric vehicles; then, a tree-based model has been developed to classify new instances of EVs and lastly an additional neural network has been trained to predict the expected duration of the charging session for each new vehicle arriving,
j5h

May 9: When considering recharging an electric vehicle (EV), the proximity of a charging station is crucial. However, traffic conditions should also be taken into account when selecting a target station. Heavy traffic can significantly impact the charging experience for the EV user. If the closest charging station is selected, it may be crowded, resulting in extended wait times. Conversely, if a charging station further away is chosen, the travel time may be longer, and traffic conditions unpredictable.

1 May: I want to create a multi-agent reinforcement learning system that can help drivers of electric vehicles manage their battery life. The system would warn the driver to turn off the electric car's AC and music when the battery is low and the driver needs to travel 40km."
Here are some ideas:
The system could also suggest the most efficient route to take based on the driver's destination and the current battery level.
The system could learn from the driver's behavior and preferences to provide personalized recommendations for battery management.
The system could also learn from other drivers' behavior to provide more accurate recommendations.
The system could use data from weather forecasts to provide more accurate recommendations for battery management.

25 Apr 2023: Lab room password 442323. Trem presentation 30 or 31 august
One hours for enough of thinking but seriously,

17 Apr 2023:
Here's a breakdown of the estimated charging times for different charging categories based on the distance that needs to be covered and the maximum voltage and current available:

For a distance of up to 3.2 kilometers, with a maximum voltage of 220 and a maximum current of 16-18A, it would take around 6-8 hours to fully charge a vehicle and travel 100 kilometers. For a distance of up to 7.4 kilometers, with a maximum voltage of 220 and a maximum current of 32-36A, it would take around 3-5 hours to fully charge a vehicle and travel 100 kilometers. For a distance of up to 10 kilometers, with a maximum voltage of 400 and a maximum current of 16A, it would take around 2-3 hours to fully charge a vehicle and travel 100 kilometers. For a distance of up to 22 kilometers, with a maximum voltage of 400 and a maximum current of 32A, it would take around 1-2 hours to fully charge a vehicle and travel 100 kilometers. For a distance of up to 50 kilometers, with a maximum voltage of 450-505 and a maximum current of 120-135A, it would take around 20-30 minutes to charge a vehicle enough to travel 100 kilometers. For a distance of up to 50 kilometers, with a maximum voltage of 350-505 and a maximum current of 320-380A, it would take around 10 minutes to charge a vehicle enough to travel 100 kilometers. It's important to note that these are estimates based on the maximum voltage and current available for each category, and actual charging times may vary depending on factors such as the capacity of the battery, the temperature, and the efficiency of the charging system. It's also recommended to follow the manufacturer's recommendations for charging to ensure the safety and longevity of the battery.

10 Apr 2023: weekly meeting 2.25 pm

9 Apr 2023: Inductive/wireless power transfer(WPT) WPT technology allows transmitting electrical energy from one device to another without any physical connection, electrical power to be transmitted wirelessly from a power source to a device. It works by creating a magnetic field

between two coils, one in the transmitter and one in the receiver, which induces an electrical current in the receiver coil. The receiving coil needs to be installed in the vehicle and the charging coil is placed on the charging station road surface.

8 Apr: Overnight depot charging: That charging offers fast and slow charging options. Overnight charging refers to charging an electric vehicle overnight, usually at home or at a charging station, using a charging cable that connects to a charging port on the vehicle.that is slower than pantograph charging but convenient.
The pantograph that connects to a charging port on the vehicle's roof. The pantograph connectors establish an electrical connection with the charging port of the vehicle and allow the transfer of electric power from the charging station to the battery of the vehicle.
Pantograph charging is mainly used for electric buses and commercial vehicles, it can charge vehicles' batteries very fast.

6 Apr 2023: There are a few ways to charge electric vehicles.Various ways can be used like conductive charging(CC), inductive/wireless power transfer(WPT), and battery

28 Mar : Tue-day Lab meeting
Next lab meeting skip

25 Mar:
There are 4 main EV categories:
1) Purely Electric; Electric engines constitute purely electric vehicles without any form of combustion. Therefore, they depend exclusively on the battery and, consequently, on its connection to the grid or some other power source.
2) Hybrids without grid connection;Hybrids with grid connection are vehicles that have 2 engines: one electric and one combustion. The battery is recharged by the electric engine working as a generator.
3) Plug-In Electric Vehicle (PHEV); PHEVs are cars with similar characteristics to the hybrids, but PHEV batteries can be recharged through a grid connection.:
4) Fuel Cell; Fuel Cell vehicles the electric energy originates from chemical reactions between hydrogen and oxygen, which results in electricity and water.

22 Mar 2023:
Conclusion
1st line What can i done
2nd line “ what can be happened here

21 Mar 2023:
There are different types of electric vehicle charging stations, including

- Level 1 charging

- Level 2 charging
- Level 3 charging

Level 1 charging is the slowest charging method for electric vehicles. It uses a standard 120-volt AC plug and can take up to 8-12 hours to fully charge an electric vehicle. It is best suited for plug-in hybrid electric vehicles (PHEVs) with smaller battery packs that can be fully charged overnight.
Level 2 charging is a faster charging method for electric vehicles. It uses a 240-volt AC plug and can take 4-6 hours to charge an electric vehicle fully. It is best suited for all-electric vehicles (EVs) with larger battery packs that require more charging time.
Level 3 charging is the fastest charging method for electric vehicles. It is also known as DC fast charging or DC quick charging. It uses a 480-volt DC plug and can charge an electric vehicle up to 80% in 20-30 minutes. It is best suited for long-distance travel and is commonly found at public charging stations.

19 Mar 2023:

The key factors when planning electric vehicle charging infrastructure include the following:

- The location of charging stations
- The type of charging stations
- The charging technology for electric vehicles
- The charging infrastructure
- The control and communication infrastructure for electric vehicle charging
- The optimal location for electric vehicle charging stations

14 Mar 2023: Next lab meeting is Wednesday 22.

12 Mar 2023: Last lab meeting sensei said to read a recent paper. The best option is 2023,2022, and 2021
today read one paper that is AAMAS 2021 paper “Siting and Sizing of Charging Infrastructure for Shared Autonomous Electric Fleets”
the main idea of this paper is to propose a method for planning the charging infrastructure for SAEVs that can minimize the total cost of ownership and operation. The paper uses a simulation model to generate realistic charging demands and an optimization model to find the optimal locations and sizes of charging stations. The paper also analyzes how different factors affect the optimal solution and provides insights for policy-makers and practitioners.
The simulation model is based on an agent-based approach that simulates the behavior and decisions of SAEVs and customers. The optimization model is a mixed-integer linear programming (MILP) problem that minimizes the total cost of charging infrastructure operation. The paper uses a two-stage approach to solve the problem:

first, it finds candidate locations for charging stations using a clustering algorithm; second, it selects the optimal locations and sizes of charging stations using the MILP model.

9 Mar 2023: This week i focus on Nihongo. Every day i try to learn some words.

6 Mar 2023: Today i read one paper “Learning to Teach in Cooperative Multiagent Reinforcement Learning”

The main contribution of this paper is to present a framework and algorithm for **peer-to-peer teaching** in cooperative multiagent reinforcement learning. The algorithm, called **Learning to Coordinate and Teach Reinforcement (LeCTR)**, trains advising policies by using students’ learning progress as a teaching reward[1][2]. The paper shows that LeCTR can improve the learning efficiency and performance of cooperative agents in various domains

Cooperative Multiagent Reinforcement Learning (CMARL) is a branch of artificial intelligence that studies how multiple agents can learn to cooperate and achieve a common goal by interacting with their environment and each other[1][2][3]. CMARL algorithms can be classified into different categories based on how the agents communicate, coordinate, and learn from their rewards[4][5]. CMARL is a challenging and active research area that has many potential applications in domains such as robotics, games, and smart grids

4 Mar 2023: Today i read one paper “Multiagent Decision-Making and Learning in Urban Environments”

A novel framework for multiagent reinforcement learning that can handle complex urban scenarios with heterogeneous agents, such as self-driving cars, ships and drones.

- A general formulation of urban environments as diffusion networks with stochastic transitions and rewards.
- A scalable algorithm for decentralized policy optimization that leverages graph neural networks and actor-critic methods.

The framework consists of three main components: a **modeling** component, a **decision-making** component, and a **learning** component.

The modeling component represents urban environments as a network of entities (such as vehicles, vessels, or humans) that interact with each other and influence each other’s behavior. The network can capture various aspects of urban dynamics such as traffic flow, congestion, demand, and supply.

The decision-making component uses game theory to analyze the strategic interactions among the entities and to compute optimal or equilibrium policies for each entity. The framework can handle different types of games such as cooperative, competitive or mixed-motive games.

The learning component uses reinforcement learning to learn from data and improve the policies over time. The framework can handle different types of learning settings such as single-agent, multi-agent, or transfer learning[1].

The framework aims to provide a general and scalable approach for multiagent decision-making and learning in urban environments that can handle various challenges such as uncertainty, complexity and heterogeneity[1].

27 Feb 2023: RNN stands for recurrent neural network, which is a type of network that can process sequential data by having feedback loops in its hidden layers. CNN stands for convolutional neural network, which is a type of network that can process spatial data by having convolutional layers that apply filters to extract features.

A recurrent neural network (RNN) is a type of artificial neural network that can process sequential data or time series data [1]. It has a cycle in its structure, which allows it to remember previous inputs and outputs [2]. It uses a for loop to iterate over the timesteps of a sequence, while maintaining an internal state that encodes information about the timesteps it has seen so far [3].

In the method proposed by Kim et al[3], the RNN is used to model the temporal dynamics of EV energy consumption based on historical driving data such as speed, acceleration, battery level, etc. The RNN can capture the long-term dependencies and patterns in the data and update its state as new information becomes available.

25 Feb 2023: Today i read one paper that is “A Machine Learning Method for EV Range Prediction with Updates on Route Information and Traffic Conditions” AAAI Conference on Artificial Intelligence (AAAI-22)

The method uses a recurrent neural network (RNN) to model the temporal dynamics of EV energy consumption and a convolutional neural network (CNN) to extract spatial features from road maps.

21 Feb 2023: Saturday campus has an exam so the campus is off

https://sites.google.com/view/sig-macc/smash/smash23-winter-symposium/program?authuser=0
https://www.ipsj.or.jp/english/jip/cfp/24-E.html
https://www.ipsj.or.jp/journal/proposal/si_schedule.html
Not going into an infinity loop

20 Feb 2023: real-time data and road conditions to get the information needed
Vehicle sensors, Road sensors, GPS and map data, Internet of Things (IoT) devices

18 Feb 2023: Today i read one paper that is " "Evaluating Market User Interfaces for Electric Vehicle Charging using Bid2Charge" and I try to find the key point

The paper proposes a simulation framework called Bid2Charge to evaluate different market-based user interfaces for electric vehicle (EV) charging.
Bid2Charge simulates a competitive market approach, where multiple EV drivers bid to charge their vehicles at a charging station and the charging station operator sets prices based on supply and demand.
The paper evaluates three different market user interfaces for EV charging: a price-based interface,
a bid-based interface,
and a hybrid interface that combines elements of both.

14 Feb 2023:sensei said ritik san AI can help sometimes.
Last lab meeting sensei suggest writing everything in the research note.

13 Feb 2023: Today is a rainy day and I'm looking for a paper that is "An Authentication Framework for Electric Vehicle-to-Electric Vehicle Charging Applications" I got it in IEEE 2017 paper.

12 Feb 2023: I submit my final and last assignment of this semester and today I start to read the research paper. I found a paper name " Rebalancing Expanding EV Sharing Systems with Deep Reinforcement Learning" Tonight I read this one.

10 Feb 2023: Hug rain today. It's a full day of rain.

8 Feb 2023: Finally 1st semester is ending .but one assignment is left the last date is 13 Feb.

31 Jan 2023: Today at 12.45 pm i did a presentation about transmedia storytelling and my topic is avatar-pandora world .and today is the last date of the information security assignment
Today in the lab meeting I understand that spending time in the lab very very important as discussions with lab members.

22 Jan 2023: Next week is semester closing week that's why I'm not able to read more papers but I read one paper that is "Automatic Instance Generation for Classical Planning".

20 Jan 2023: Last lab meeting I notice I collected the wrong paper that's why today I collect AAAI Conference on Artificial Intelligence (AAAI-19) paper named "Multiagent Decision Making For Maritime Traffic Management" today I read the paper.

IJCSNS International Journal of Computer Science and Network Security, VOL.19

8 Jan 2023: Ev charging framework-related paper

3 Jan 2023:Today I found some papers related to Ev, and I set my goal to work in Ev charging framework-related work

2 Jan - 2023: Today I think that I work in the Ev charging system using multi-agent. I search AAMAS, ISWC, AAAI, AAI, IIAI, PRIMA, and IJCAI all sites about that topic.

https://www.amazon.co.jp/Algorithmic-Game-Theory-Noam-Nisan/dp/0521872820

17 December: How can I choose a good topic for my research paper? I don't know where to start

5 December: Today i saw a paper that is The Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20) Paper's name is "Learning to Communicate Implicitly by Actions" human collaborators act by learning to (i) infer meaning behind their partner's actions, and (ii) convey private information about
the state to their partner implicitly through actions.Introduce a novel algorithm: Policy Belief Learning (PBL). PBL uses a belief module to model the other

agent's private information and a policy module to form a distribution over actions informed by the belief module. Propose a novel auxiliary reward which incentivizes one agent to help its partner to make correct inferences about its private information. The auxiliary reward for communication is
integrated into the learning of the policy module.

27 November: Today I search paper ifaamas and iiai sites i found some paper downloads some of that and i start to see these papers.

25 November: In Online (AAMAS 2021) - originally planned for London, UK, I read today "Multi-modal Agents for Business Intelligence".

22 November: Time management is important, Sensei told me to note which paper I want to read.

21 November: AAAI site paper I try to access it but I can't, but I saw the 2022-2018 IJCAI paper based on multi-agent, and I found some interesting papers such as "Combining Direct Trust and Indirect Trust in Multi-Agent Systems" (2020) https://www.ijcai.org/proceedings/2020/44 .

After I read this paper I got some ideas about Combining Direct Trust and Indirect Trust in Multi-Agent Systems (2020)

The first systematic study on when and how to combine direct with indirect trust in decision-making. The results of our broad empirical analysis show that the best methods for computing indirect trust benefit from incorporating direct trust only in certain categories of settings, especially when advisors change their behavior dynamically. One of the methods for combining direct and indirect trust dominates all other tested methods, regardless of the indirect trust method used in conjunction.

19 November: Today I find out some websites such as AAMAS, ISWC,AAAI, AAI, IIAI, PRIMA, IJCAI,ISWA

24 October 2022: Today I installed Latex software. I watch LaTex tutorial on how to use latex. And I started to write a research note today.