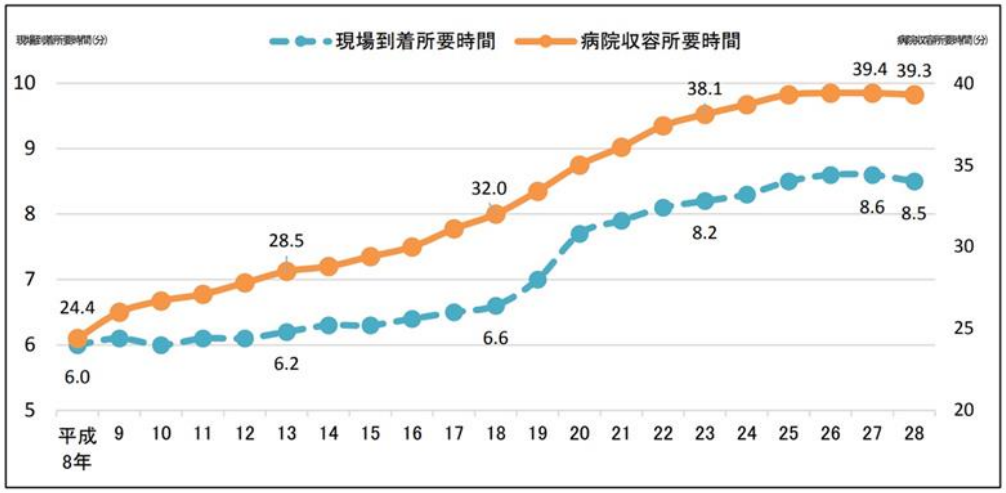
Who am I ?

- **Naoya** YABUKI (24)
  - 1st year of Master Course in Graduate School of System Informatics, Kobe University (Nakamura Lab.)
- Likes
  - POKEMON
  - Playing tennis
  - Music / Rhythm games
- Studying
  - Smart City
  - Data-intensive applications using big data
  - Ambulance Simulator

Dispatch of Ambulance in Kobe

- Increasing number of emergency dispatches
  - in Kobe:2013 78,006 case → 2017 83,081 case
- Increasing arrival times & transportation time
  - arrival times:1996 6.0 min → 2016 8.5 min
  - transport time:1996 24.4 min → 2016 39.3 min
- not changed number of ambulances

→Efficient assignment of limited resources is important



Collecting data and challenge

- Kobe Fire Dept. collects every dispatch by ICT system
  - expecting data-based resource optimization

ID	unit	fire station	scene	hospital
2018-113	Nada	Nada	3 Sinoharaminami Nada	Kobe Central Hospital

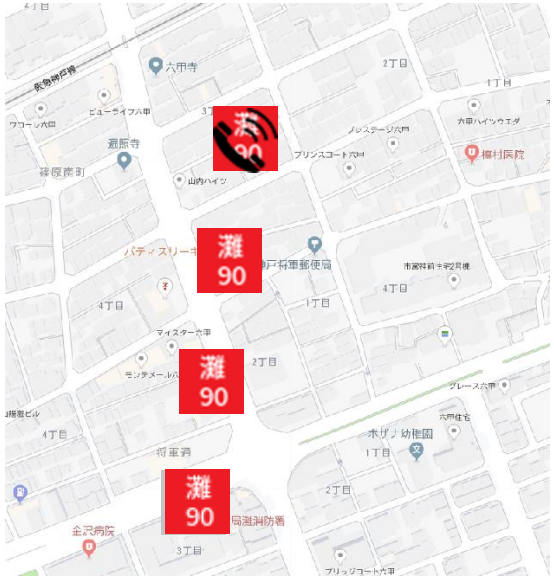
Dispatch time	Scene arrival time	Scene departure time	Hospital arrival time	Hospital departure time	Return time
2018-10-31 10:30:00	2018-10-31 10:33:00	2018-10-31 10:50:00	2018-10-31 11:00:00	2018-10-31 11:10:00	2018-10-31 11:30:00

- However…
  - Big Data analysis requires advanced skills
  - Difficult for fire department staff

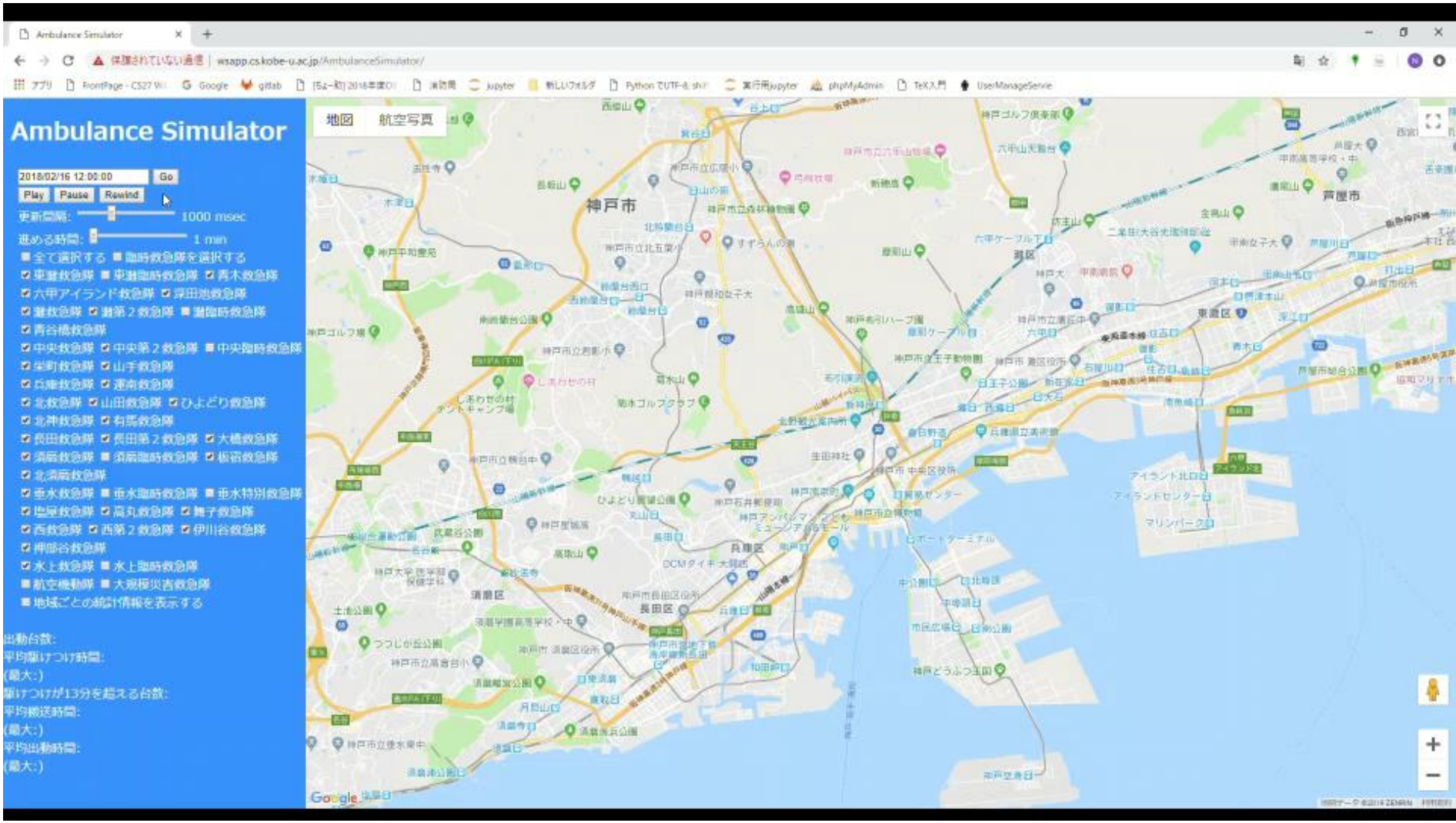
Ambulance Simulator

- Enable non-experts to grasp emergency dispatch
  - To look back on the situation of ambulance dispatch at any time
    - Position and status of every ambulances
  - To check the statistics of dispatch
    - Average arrival times, Number of dispatches by region
- Visualize dispatch in every minute on a map
  - Transform original data into minute-wise status and position

date	status	latitude	longitude
10:29	Waiting	Nada Fire Station	
10:30	Dispatched		
10:31	Dispatched		
10:32	Dispatched		
10:33	Arrived	3 Sinohara Minami	



Demonstration



Message to Young Students

- Analyzing big data reveals unexpected facts!
- Happy to see that my app works well!
- Can help city and government by my research

- My personal advice
  - Be curious for everything!
  - Study programming! Then you can do complex data analysis
  - The contest determines winner and losers, however, what important is to learn and enjoy!