

Chuang Yang

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EDUCATION

Department of Information & Communication Engineering, the University of Tokyo
Pursing Ph.D degree in Information Science and Technology

Since Oct. 2022
Asano, Japan

Center for Spatial Information Science, the University of Tokyo
M.S. degree in Socio-Cultural Environmental Studies
Supervised by [Prof. Ryosuke Shibasaki](#) and [Prof. Renhe Jiang](#)

Sep. 2020 – Sep. 2022
Kashiwa, Japan

Center for Spatial Information Science, the University of Tokyo
Research Student
Supervised by [Prof. Ryosuke Shibasaki](#) and [Prof. Renhe Jiang](#)

Oct. 2019 – Aug. 2020
Kashiwa, Japan

Southern University of Science and Technology
B.S. degree in Computer Science

Sep. 2015 – Jun. 2019
Shenzhen, China

RESEARCH

Research Areas -> *All about the mobility data :)*

- **Representation Learning on Large-scale Geospatial Data (Ongoing*)**
- Trajectory-based Epidemic Simulation ([TVCG 22](#), [TSAS 22](#))
- Interactive Trajectory Data Exploration ([ICDE 19](#))
- Deep Learning for Mobility Prediction at Different Spatial Scale
 - * Region-level ([WWW 23](#), [ECML/PKDD 22,21](#)), Grid-level ([TIST 22](#), [TKDE 21](#)), Individual-level ([SIGSPATIAL 20](#))

Selected Research Papers

- **Chuang Yang**, Zhiwen Zhang, Zipei Fan, Renhe Jiang, Qunjun Chen, Xuan Song, Ryosuke Shibasaki. EpiMob: Interactive Visual Analytics of Citywide Human Mobility Restrictions for Epidemic Control. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Apr. 2022. [[pdf](#)] [[demo video](#)]
- **Chuang Yang**, Yilan Zhang, Bo Tang, Min Zhu. Vaite: a Visualization-assisted Interactive Big Urban Trajectory Data Exploration System. *Proc. of the 35th IEEE International Conference on Data Engineering (ICDE)*, Macau, China, Apr. 2019. [[pdf](#)]
- Zipei Fan, **Chuang Yang**, Zhiwen Zhang, Xuan Song, Yinghao Liu, Renhe Jiang, Qunjun Chen, Ryosuke Shibasaki. Human Mobility based Individual-level Epidemic Simulation Platform. *ACM Transactions on Spatial Algorithms and Systems (TSAS)*, Mar. 2022. [[pdf](#)]
- Qi Cao, Renhe Jiang, **Chuang Yang**, Zipei Fan, Xuan Song, Ryosuke Shibasaki. MepoGNN: Metapopulation Epidemic Forecasting with Graph Neural Networks. *Proc. of the 26th European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD)*, Sep. 2022. [[pdf](#)]

Selected Resource Papers

- **Chuang Yang**, Renhe Jiang, Ryosuke Shibasaki. MaaS System Visualization. *Big Data and Mobility as a Service 9*, 245-263, Elsevier, 2022. [[pdf](#)]
- Yudong Tao, **Chuang Yang**, Tianyi Wang, Erik Coltey, Yanxiu Jin, Jinghao Liu, Renhe Jiang, Zipei Fan, Xuan Song, Ryosuke Shibasaki, Shu-Ching Chen, Mei-Ling Shyu, Steven Luis. A Survey on Data-Driven COVID-19 and Future Pandemic Management. *ACM Computing Surveys (CSUR)*, Jun. 2022. [[pdf](#)]

WORKING EXPERIENCE

Loregit Inc.

CTO, Technical Co-founder (Freelance)

Jan. 2020 – Now

Shenzhen, China

- A start-up company established with classmates during undergraduate studies.
- Committed to developing a knowledge management platform called Loregit.
 - * It stores all human knowledge and their dependencies.
 - * Knowledge Mirror: manage personal knowledge status in cloud like managing package dependencies.
 - * Knowledge Navigation: help users find the best learning path given the learning objective.
 - * Consensus Mechanism: collaborative editing, public voting, to promote iterative upgrades of KG.

LocationMind Inc.

Research Intern (Part time)

Apr. 2020 – Apr. 2022

Tokyo, Japan

- Designed a fine-grained epidemic model to simulate the propagation dynamics in the Greater Tokyo Area.
- Integrated Stop Points Detection&Time Interpolation functions into HMM Map Matching Algorithm in Java.
- Joined [xPop](#) team and in charge of infrastructure operation and maintenance.

SouthIntelligence Tech. Co. Ltd.

Software Engineering Intern (Full time), supervised by [Dr. Yilun Cai](#)

Jul. 2018 – Oct. 2018

Shenzhen, China

- Participated in building an elasticsearch-based macro policy search engine.
 - * Designed and developed a mini web app for the interactive exploration of elasticsearch scoring function.
 - * Developed part of search engine queries.
 - * Built a Python script for deployment in production environment.
 - * Developed the background master control program (MCP) in Python.

Database Group@SUSTech

Undergraduate research assistant (Part time), supervised by [Prof. Bo Tang](#)

Oct. 2017 – Jul. 2019

Shenzhen, China

- Teacher Assistant for CS302 Operating System, Spring 2019, CSE@SUSTech
- Proposed a data visualization system, named [Vaite](#).
 - * Published at IEEE ICDE 2019 in first author.
 - * A visualized assisted exploration system to help users discover useful insights from big trajectories.
 - * Oriented towards users without experience or knowledge on issuing their analysis tasks by SQL like queries.
 - * Driven by Apache Spark, thus supports near real time response.

COMMUNITY SERVICES

- Program Committee Member for [ECML/PKDD 2021,2022](#)
- Reviewer for Journal [IEEE TITS](#), [ACM TSAS](#)
- Subreviewer for [ACM SIGSPATIAL 2021,2022](#)
- External Reviewer for [PAKDD 2023](#)

SKILLS

- **Languages:** Python, JavaScript(ReactJS, JQuery), HTML/CSS, SQL, Java, Scala
- **Data Visualization Tools:** Leaflet.js, Deck.GL, Recharts, Material-UI, D3.js
- **Big Data Processing Tools:** Apache Spark SQL
- **Data Exploration Tools:** Lux
- **Development Framework:** Django (Python), Flask-RESTful (Python), Play (Scala)
- **Others:** Elasticsearch, Linux Commands