Aparimit Kasliwal

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Education

May, 2024 - Present	PhD (Systems Engineering) **UC Berkeley, CA** Research Focus: Network Science, Transportation Modeling, System Resilience	(Major GPA: 4.0/4.0)
Aug, 2023 - May, 2024	MS (Systems Engineering) **UC Berkeley, CA** Graduate Certificate in Applied Data Science	(GPA: 3.87/4.0) (GPA: 4.0/4.0)
Jul, 2019 - May, 2023	BTech (Civil Enigneering) **IIT Delhi, India**	(GPA: 8.14/10.0)

Projects

- **Multi-Scale Traffic Congestion Spreading through Contagion Models** Project Description
  - Inferring congestion patterns at multiple spatial scales with traffic simulations based on CDR
  - Modeling traffic congestion spread with SIS (Susceptible / Infected) epidemic spreading model
- **Pricing & Matching Policy Development for Ride-sharing** Course Description
  - Modeled spatial demand patterns using Uber H3 Hexagons for pricing riders accordingly
  - Developed dynamic pricing & matching algorithms which are based on riders in the state
- **Resilience of Singapore MRT to Floods & Targeted Attacks** Research Programme
  - Modeled MRT Network in Python, developed a Flood Resistance Index to quantify resilience

Publications

Rafaela O.P. Amr S.A. **Aparimit K.**, Mazdak N. (Mar. 2024). "Labeling Construction, Renovation, and Demolition Waste through Segment Anything Model (SAM)". In: *Construction Research Congress 2024*, pp. 279–288. URL: https://doi.org/10.1061/9780784485262.029.

Skills

Programming:	Python, Pandas, GeoPandas, OSMNx, NetworkX, Git, Bash, MATLAB
Technical Skills:	Geo-tagged Data, Map Matching, Trajectory Generation, Uber H3, Networks
Transportation Skills:	Traffic Simulations (SUMO), Routing, Congestion Analysis, Traffic Control

Research & Teaching

Graduate Student Researcher	Networked Infrastructure Under Compound Extremes	2024 -
Graduate Student Instructor	CE 100: Elementary Fluid Mechanics	Fall 2023
	CE C88: Data Science for Smart Cities	Spring 2024

Graduate Level Coursework

EECS 227AT: **Optimization** Models

INFO 251: Applied **Machine Learning**

CE 263H: Human **Mobility & Network** Science

CE C258: Supply Chain & **Logistics** Management

CE 262: Analysis of **Transportation Data**

CE 291D: **Data-Driven Control** Methods