

# Aparimit Kasliwal

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## EDUCATION

May, 2024 - Present	PhD (Systems Engineering) <b>UC Berkeley, CA</b> <i>Designated Focus:</i> Computational Data Science & Engineering. <i>Research Focus:</i> Network Science, Mobility Modeling, Learning Representations for Spatial Graphs, System Resilience.	(Major GPA: 4.0/4.0)
Aug, 2023 - May, 2024	MS (Systems Engineering) <b>UC Berkeley, CA</b> Graduate Certificate in Applied Data Science	(GPA: 3.87/4.0) (GPA: 4.0/4.0)
Jul, 2019 - May, 2023	BTech (Civil Enigneering) <b>IIT Delhi, India</b>	(GPA: 8.14/10.0)

## FEATURED PUBLICATIONS

- Ayşe Tugba O., **Aparimit K.** et al. (2025). “A Mesoscopic Model of Vehicular Emissions Informed by Direct Measurements and Mobility Science”. In: *Under Review at Sustainable Cities & Society*.
- Shangqing C. **Aparimit K.** Masoud R. Francesc R., Mark H. (Nov. 2024). “Effective Management of Airport Security Queues with Passenger Reassignment”. In: *Accepted to Proceedings of IWAC (International Workshop on Air Traffic Management, Communication, Navigation, and Surveillance) 2024*. URL: <https://arxiv.org/pdf/2407.00951>.

## PROJECTS

- **Modeling Multi-Scale Dynamics on Hierarchical Networks** [Project Description](#)
  - Infection spread modeling (COVID-19, Traffic Congestion) through Network-level SIR Models
  - Consistency in parameters at hierarchical scales ensured through Mean-Field Approximation
- **Pricing & Matching Policy Development for Ride-sharing** [Course Description](#)
  - Spatial modeling of demand patterns through Uber H3 Indexing for pricing riders accordingly
  - Development of state-based, dynamic, and optimal pricing & matching policies for ride-sharing

## SKILLS

**Programming:** Python, Git, Bash, Scientific & Statistical Computing, MATLAB, NetworkX  
**Machine Learning:** Code Parallelization, JAX, Pytorch, PyG, Graph Representation Learning  
**Technical Skills:** Geo-tagged Data, Map Matching, Trajectory Generation, Uber H3, Networks

## GRADUATE LEVEL COURSEWORK

CS 267: Applications of <b>Parallel Computers</b>	CS 294-179: <b>Networks</b> & Spread of <b>(Mis)Information</b>
EECS 227AT: <b>Optimization</b> Models	STAT 243: <b>Statistical Computing</b>
CE 291D: <b>Data-Driven Control</b> Methods	CE 263H: Human <b>Mobility &amp; Network</b> Science
INFO 251: Applied <b>Machine Learning</b>	CE 290I: <b>Control &amp; Information</b> Management