

1 Apple Park Way,
Cupertino,
CA 95014, United States

Email: sid2harthgupta@apple.com
Contact: +1-(408)-348-9689
Page: sid2harthgupta.github.io

WORK

- **Apple Inc.** Cupertino, CA
Dec 2016 - present
Software Engineer
 - Designed and A-B tested new traffic algorithms for next-generation Apple Maps
 - Supported base maps from multiple vendors with different principles for network abstraction
 - Reduced runtime (3x) and artifact size (25%) for traffic models used in production workflows
 - Built new evaluation schemes and proactive monitoring techniques while improving ETA accuracy and increasing stability of production workflows
 - Co-supervised two interns and helped them achieve their goals by arranging regular check-ins, assisting in planning and code reviews

EDUCATION

- **Massachusetts Institute of Technology** Boston, USA
Aug 2015 - Dec 2016
MS: Interdisciplinary Transportation Engineering
 - 100% financial aid, Chair of the Transportation Student Group
 - Research Assistant at the Human Mobility and Networks Lab. Publications:
 - * TimeGeo: modeling urban mobility without travel surveys, *S. Jiang, Y. Yang, S. Gupta, D. Veneziano, S. Athavale, and M.C. Gonzalez, PNAS, 2017*
 - * Planning for sustainable cities by estimating building occupancy with mobile phones, *E. Barbour, C.C. Davila, S. Gupta, C. Reinhart, J. Kaur, and M.C. Gonzalez, Nature Communications, 2019*
 - Part of the US Squash- MIT Club Team 4.5 ladder. Only student to complete program in 3 semesters
- **Indian Institute of Technology Madras** Chennai, India
July 2010 - May 2015
B.Tech. & M.Tech.: Civil Engineering, Infrastructure Planning and Management
 - Awarded best research project in the Civil Engineering Research Symposium
 - * *Data Mining and Modeling for Smart Transit Management, Gupta, S., Hickman, Srinivasan, K.K., Conference on Advanced Systems in Public Transit, Rotterdam, 2015*
 - * *Development and Evaluation of Advanced Traveller Information Systems for Indian Cities, A Case Study in Chennai City, Center of Excellence in Urban Transport*
 - * Represented the Intelligent Transportation Systems Lab from IIT-Madras and University of Queensland at Gifu, Japan and Rotterdam, Netherlands
 - Exchange Program: Scholarship for semester at Concordia University, Montreal.
 - Entrepreneurship: Raised \$10,000 to create a campus-wide social network. Worked as the Co-founder and CEO for over a year. Lead a team of 5 engineers and got over 1,000 students to sign up

PROGRAMMING SKILLS

- Scala, Java, Python, Git, Spark, Hadoop, R, MySQL
- Javascript, HTML, CSS, Bootstrap, NodeJS, RESTful services

COURSE WORK

- Machine Learning- Gradient descent, Logistic Regression, Neural networks, SVMs, Kernels
- Analyzing Choice- regression models, logit, probit and nested logit modeling and their implementation
- Data Manipulation at Scale- Map Reduce, NoSQL, MongoDB, Data Analysis using R
- Network Analysis- Shortest path, Minimum Cost, Maximum Flow problems- theory and implementation
- Microeconomics, Transportation demand and economics- Theory of the firm, Cost function, Pricing, Uncertainty, Revenue Management
- Advanced Structural Analysis, Geotechnical Engineering, Hydrodynamics and Water Resource Engineering, Functional Design of Buildings