

Harshit Daga

Ph.D. Student, Georgia Tech, Graduating in Spring 2022

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EDUCATION

Georgia Institute of Technology, USA	PhD in Computer Science	GPA 4.0/4.0	Fall 2016 - *
IIIT-Hyderabad, India	BTech. (Honours) Computer Science and Engineering	GPA 8.0/10.0	2008 - 2012

RESEARCH & PUBLICATIONS

- *CLUE: A System for Collaborative Learning for Neural Nets* (Under Submission)
 - Proposed a framework that integrates support for collaborative deep learning by dynamically extracting the significant parameters from other neural network models.
- *Cartel: A System for Collaborative Transfer Learning at the Edge Cloud* ([Paper](#) & [Poster](#)) **SoCC'19**
SEC '18
Cartel: Collaborative Edge Learning ([PhD Forum](#))
Harshit Daga, Patrick Nicholson, Ada Gavrilovska and Diego Lugones.
 - Proposed a collaborative system to create, distribute and update machine learning models across geographically distributed edge clouds.
 - Demonstrated the system adapts to workload changes faster, reduces model size, (re)training time and total data transfer by 3x, 5.7x and ~1500x, respectively, when compared to centralized learning system.
- *From Back-of-the-envelope to Informed Estimation of Edge Computing Benefits in Minutes using Castnet* ([Paper](#)) **ICFC'19**
Harshit Daga and Hobin Yoon and Ketan Bhardwaj and Harshit Gupta and Ada Gavrilovska
 - Develop Castnet – a fast, extensible, and easy-to-use framework for evaluating the benefits of MEC for different edge deployment models, configuration and functions.

Experience

- Graduate Research Assistant** | Georgia Tech (Dr. Ada Gavrilovska) Fall 2016 - *
 - Design and evaluate system for machine learning in a resource constraint multi-access edge environment.
 - Travel Grants - ACM SoCC ' 19, ACM/IEEE SEC' 19, ACM/IEEE SEC' 18, USENIX OSDI' 16.
- Research Intern** | Nokia Bell Labs, Dublin (Dr. Diego Lugones & Dr. Patrick Nicholson) Summer 2018
 - Identified a research problem interfacing machine learning and edge computing.
 - Developed a system for collaborative learning at the edge cloud, that creates a model-sharing environment in which tailored models at each edge can quickly adapt to changes and are as robust and accurate as centralized models.
- Research Intern Data Analytics** | ADP Innovation Labs, Atlanta (John Derrico) Summer 2017
 - Constructed an algorithm based on the data analysis to develop an automated process to increase the accuracy of NAICS code assignment for the company.
- Senior Software Developer** | IVY Comptech (subsidiary of Entain plc, formerly GVC Holdings), India 2012-2016
 - Designed and developed solutions for players' registration, account related difficulties, verification and responsible gaming.

Leadership

- Vice President of Graduate Events**, Student Government Association | Georgia Tech 2019 - *
 - Responsibility entailed organizing events to engage graduate students and improve their work-life balance.
 - Secured sponsorship of over \$140,000 from 35 different funding sources, an increase of 125% from past year.
 - Chaired the annual Graduate Student Welcome attended by 2,300 students an increase of ~87% attendance.
 - Conceived Illuminate Tech, a series of talks envisioned to inspire and motivate the Georgia Tech community.
- Vice President of Operations**, India Club at Georgia Tech 2017-18
 - Lead a team of 15 members to ensure efficient operation of 4 events with a total attendance of 3,000.

Technical Skill Set

Languages: Python, JAVA, C/C++, Node.js, HTML, CSS, JavaScript, PHP

Database Technologies: MySQL, PL/SQL, NoSQL (MongoDB, Redis)

Others: Docker, AWS, Google App Engine, Hadoop, Android, PhoneGap

Achievements

- [Georgia Tech Danielle McDonald Legacy Award](#), Up with the White & Gold (co-hosted by the Division of Student Life and SGA) 2020
- [Faces of Inclusive Excellence honoree](#), selected by Institute Diversity, Equity, & Inclusion at Georgia Tech 2020
- **Georgia Tech Leadership Fellow**, Leadership Education and Development (LEAD) Office 2019
- **Exceptional Retention Award** given by Bwin.Party for extraordinary contribution towards the Company 2014
- **Certificate of Merit** awarded by CBSE for being in top 0.1% of the candidates in Mathematics 2008
- **CBSE Merit Scholarship** awarded by Ministry of Human Resource and Development, Govt. of India