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

- *A System for Collaborative Learning for Neural Nets* (Paper) **2021**
  Harshit Daga, Yiwen Chen, Aastha Agrawal and Ada Gavrilovska
  - 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 & PhD Forum) **SoCC'19 | SEC '18**
  Harshit Daga, Patrick Nicholson, Ada Gavrilovska and Diego Lugones.
  - A collaborative system to create, distribute and update machine learning models across geo-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 | Emerging Technologies and Incubating, Cisco, Atlanta (Dr. Myungjin Lee) Summer 2021
  - Design and developed a system that decouples the system deployment, topologies, and communications from the machine learning tasks (Patent Pending).

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

President, School of Computer Science Graduate Student Association | Georgia Tech 2021-*
Vice President of Graduate Events, Student Government Association | Georgia Tech 2019-20
  - 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