Paridhika Kayal, Ph.D.

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Education

Sep 2017 – Aug 2024 — **PhD student, University of Toronto, ON, Canada** in Electrical and Computer Engineering. GPA – 3.88 out of 4.0
Thesis title: *Efficient DAG Application Deployment Strategies in Single-tier and Multi-tier Computing Environment*

Aug 2015 – Dec 2016 — **M.S., North Carolina State University, NC, USA** in Computer Science Computer Networking and Telecommunication. GPA – 4.0 out of 4.0
Thesis title: *A Comparison Of IoT Application Layer Protocols Through A Smart Parking Implementation.*

Aug 2008 – May 2012 — **BTech., International Institute of Information Technology, Hyderabad, India.** in Computer Science

Research Interest

Distributed Optimizations, Communication Networks, Internet of Things, Resource Management

Research Publications

2024
- **QoS-aware, cost-efficient scheduling for data-intensive DAGs in multi-tier computing environment under review at IEEE Transactions on Cloud Computing**
- **DNNSplit: Latency and Cost-efficient Split Point Identification for Multi-tier DNN Partitioning under review at IEEE ACCESS**
- **Kayal, P. "Autonomic IoT Application Placement in Edge/Fog Computing." J Math Techniques Comput Math 3.1 (2024): 01-08.**

2020
- **P. Kayal, "Kubernetes in Fog Computing: Feasibility Demonstration, Limitations and Improvement Scope : Invited Paper," IEEE 6th World Forum on Internet of Things (WF-IoT), Oct. 2020, pp. 1-6.**
- **P. Kayal, "Kubernetes: Towards Deployment of Distributed IoT Applications in Fog Computing," In Companion of the ACM/SPEC International Conference on Performance Engineering (ICPE '20), April 2020, pp. 32–33.**

2019
- **P. Kayal and J. Liebeherr, "Poster: Autonomic Service Placement in Fog Computing," In Proceedings of the 2019 on Wireless of the Students, by the Students, and for the Students Workshop (S3'19), Oct. 2019**
- **P. Kayal and J. Liebeherr, "Distributed Service Placement in Fog Computing: An Iterative Combinatorial Auction Approach," IEEE 39th International Conference on Distributed Computing Systems (ICDCS), July 2019, pp. 2145-2156.**

Research Publications (continued)

- **P. Kayal and J. Liebeherr, "Autonomic Service Placement in Fog Computing," IEEE 20th International Symposium on "A World of Wireless, Mobile and Multimedia Networks" (WoWMoM), June 2019, pp. 1-9.**

2017

- **P. Kayal and H. Perros, "A comparison of IoT application layer protocols through a smart parking implementation," 20th Conference on Innovations in Clouds, Internet, and Networks (ICIN), March 2017, pp. 331-336.**

Skills

Academic research, Teaching,Java, C/C++, Python, JavaScript, Shell Scripting, MATLAB.

Awards and Achievements

2020
- **Received Outstanding Student Paper Award for an invited talk at IEEE 6th World Forum on Internet of Things**

2016
- **Featured in the Dean's List of Academic Excellence in Engineering Award at NCSU.**
- **Scholarship recipient, to attend Grace Hopper Celebration (GHC).**

2013
- **Received Bronze Award for excellent performance at IVY Comptech (Bwin.party)**

2012
- **Featured in the Dean's List Award for Academic Excellence, IIIT HYDERABAD.**

2008
- **Secured All India Rank of 1013 in AIEEE (total 860,000 students) and 5050 in IITJEE.**

Industry Experience

Apr 2017 - Aug 2017
- **Software Development Engineer** at Amazon.com, Inc.

Jun 2016 - Aug 2016
- **Software Development Intern** at Amazon.com, Inc.

May 2014 – Aug 2015
- **Associate Application Developer** at ServiceNow Inc.

June 2012 – April 2014
- **Software Development Engineer** at IVY Comptech Pvt. Ltd.

Teaching Experience

Jan 2024 - Apr 2024
- **Teaching Assistant** at University of Toronto. Communication Networks I under Prof. S. Valaee

Jan 2023 - April 2023
- **Teaching Assistant** at University of Toronto. Computer Fundamentals, Fundamentals of Computer Programming, Computer Networks I in the ECE department, and Introduction to Computer Programming in the CS department.

Sep 2022 - Dec 2022
- **Teaching Assistant** at University of Toronto. Foundations of Computing and Computer Networks I.

Jan 2022 - April 2022
- **Teaching Assistant** at University of Toronto. Computer Fundamentals and Programming on the Web.

Sep 2021 - Dec 2021
- **Teaching Assistant** at University of Toronto. Computer Networks, Operating Systems, and Computer Networks I.

Teaching Experience (continued)

Jan 2021 - April 2021	**Teaching Assistant** at University of Toronto. Programming on the Web and Computer Fundamentals in CS department
Jan 2020 - April 2020	**Teaching Assistant** at University of Toronto. Introduction to Databases with Prof. Danny Heap and Prof. Mark Kazakevich, Programming on the Web under Prof. Mark Kazakevich and Introduction to Machine Learning under Prof. Ashish Khisti and Prof. Ben Liang
Jan 2019 - April 2019	**Teaching Assistant** at University of Toronto. Computer Networks II under Prof. Jorg Liebeherr
Sep 2017 - Dec 2019	**Teaching Assistant** at University of Toronto. Inter networking course under Prof. Jorg Liebeherr, Communication Networks I.
Aug 2011 – April 2012	**Teaching Assistant** at IIIT-Hyderabad. Computer Networks and General and Structural Chemistry.