

# Divyanshu Saxena

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## Education

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- The University of Texas at Austin** 2021–Present  
*Ph.D. in Computer Science, Advisor: [Prof. Aditya Akella](#)*
- University of Wisconsin-Madison** 2020–2021 (Transferred)  
*Ph.D. in Computer Science, Advisor: [Prof. Aditya Akella](#)*
- Indian Institute of Technology, Delhi** 2016–2020  
*B.Tech. in Computer Science and Engineering*

## Publications

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**Research Interests:** Microservices and Cloud Deployments, Large-scale Networked Systems, ML for Systems

### Papers

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- **Divyanshu Saxena**, Tao Ji, Arjun Singhvi, Junaid Khalid, and Aditya Akella. [Memory deduplication for serverless computing with Medes](#). In Proceedings of European Conference on Computer Systems (**EuroSys**), April 2022. *Appears as an invited paper in SIGOPS Operating Systems Review.*
- Tao Ji, **Divyanshu Saxena**, Brent E. Stephens, and Aditya Akella. 2023. [Yama: Providing Performance Isolation for Black-Box Offloads](#). In Proceedings of 2023 ACM Symposium on Cloud Computing (**SoCC**), October 2023.

### Workshop, Poster, and Short Papers

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- **Divyanshu Saxena**, Nihal Sharma, Donghyun Kim, Rohit Dwivedula, Jiayi Chen, Chenxi Yang, Sriram Ravula, Zichao Hu, Aditya Akella, Joydeep Biswas, Swarat Chaudhuri, Isil Dillig, Alex Dimakis, Daehyeok Kim, and Christopher Rossbach. 2023. [On a Foundation Model for Operating Systems](#). In **MLSys Workshop at NeurIPS'23**.
- **Divyanshu Saxena**, William Zhang, Madhav Tummala, Saksham Goel, and Aditya Akella. 2023. [Invited Paper: Towards Efficient Microservice Communication](#). In Proceedings of the **ApPLIED '23 Workshop at PODC '23**.
- **Divyanshu Saxena**, Saksham Goel, William Zhang, Madhav Tummala, and Aditya Akella. 2023. [Poster: Application-tailored Communication with xMesh](#). In **Poster Session at NSDI '23**

### Manuscripts in submission

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- **Divyanshu Saxena**, William Zhang and Aditya Akella. 2023. [Expressive and High-Performance Service Meshes Using Copper Wire](#)
- Le Xu, **Divyanshu Saxena**, Neeraja J. Yadwadkar, Aditya Akella, and Indranil Gupta. 2023. [Dirigo: Self-scaling Stateful Actors For Serverless Real-time Data Processing](#). arXiv preprint arXiv:2308.03615.

## Professional Experience

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- Microsoft Research** | Research Intern at *Networking Research Group* May 2022 - Aug 2022  
*Development of a userspace network stack for cloud tenants*
- Joint Seat Allocation Authority (JoSAA)** | Software Intern Feb 2020 - Oct 2020  
*Developed and managed database and website for the Joint Engineering Examination (JEE)*
- Indian Institute of Science, Bangalore** | Research Intern with *Prof. Yogesh Simmhan* Jul 2020 - Sep 2020  
*Designing adaptive consistency models for Distributed Edge Storage*
- Cohesity** | Member of Technical Staff Intern May 2019 - Jul 2019  
*Adding Zero Copy Buffer Payloads over gRPC*
- National University of Singapore** | Research Intern with *Prof. Andrew Lim* May 2018 - Jul 2018  
*Designing heuristics for a Two Echelon Vehicle Routing Problem*

## Scholastic Achievements

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- Awarded a **Departmental Scholarship** of USD3000 for the academic session 2020-21 at the UW-Madison.
- Secured **All India Rank 64** in Joint Entrance Exam Advanced - 2016 among 1.5 million applicants.
- Secured **All India Rank 61** in Kishore Vaigyanik Protasahan Yojana (KVPY) - 2015 conducted by IISc Bangalore.
- Secured **All India Rank 1** in FIITJEE Talent Reward Examination (FTRE) - 2014 conducted by FIITJEE Ltd.
- Felicitated with **Design Innovation Summer Award** - 2017 by the Ministry of Human Resource Development (MHRD), given to selected projects from IIT Delhi, for the project *Person Counter and Display Device*.
- Conferred a nine-year scholarship on qualifying **National Talent Search Examination** (2012), conducted by NCERT.
- Qualified the **National Standard Examination** in Physics (NSEP) and Chemistry (NSEC) in 2016.

## Teaching Experience

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- Mentor** | Directed Reading Program (DiRP), Emerging Cloud Infrastructure *Fall 2023*
- Teaching Assistant** | Programming III, Department TA Position at UW-Madison *Fall 2020*
- Teaching Assistant** | Artificial Intelligence, offered by **Prof. Mausam** at IIT Delhi. *Fall 2019*

## Relevant Courses

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### Systems.....

Operating Systems, Computer Networks, Relaxed Memory Concurrency, Special Module in High Speed Networks, Distributed Systems, Mobile and Wireless Networking, Datacenters, Program Synthesis

### ML/AI.....

Artificial Intelligence, Machine Learning, Computer Vision, Information Retrieval, Reinforcement Learning, SysML: Computer Systems and Machine Learning

## Positions of Responsibility

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- Class Convener** | Elected among 104 students of 2016 Entry Computer Science Batch *April 2019 - July 2020*
- Student Mentor** | IIT Delhi *June 2018 - May 2019*