



Debojeet Das

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EDUCATION

Degree	Institute/Board	CGPA/%	Year
Doctor of Philosophy	Indian Institute of Technology, Bombay	9.33*/10	2022 – Present
Bachelor of Technology (CSE)	Central Institute of Technology, Kokrajhar	9.57/10	2018 – 2022
Higher Secondary	Cotton College, Guwahati	75.20 %	2015 – 2017
Matriculation	Arunodoi Academy, Tangla	87.83 %	2015

RESEARCH INTERESTS

Network Functions, Cloud Networking, Network Virtualization, Cloud Computing

RESEARCH PUBLICATIONS

- **Development and Testing of "TeachAR" - A Web-Based Augmented Reality Teaching Platform:** Debojeet Das et al., IAFOR Journal of Education - Volume 11 Issue 2: Technology in Education (Under Review)

PROJECTS

- **eXpress UPF: Accelerating 5G UPF using XDP** Jan 2023 – Apr 2023
R&D Project, Guide: Prof. Mythili Vutukuru
 - Implemented and evaluated a robust 5G User Plane Function (UPF) using eXpress Data Path (XDP).
 - Demonstrated the potential of this approach to achieve performance comparable to state-of-the-art UPFs, enabling cloud-based UPF implementation.
- **Performance Modeling of a Web Server** Jan 2023 – Apr 2023
Performance Analysis of Computer Systems and Networks, Guide: Prof. Varsha Apte
 - Built a modular discrete event simulator and empirical models to predict performance of real world web servers.
 - Correctly predicted performance characteristics by comparing simulation results under different configurations with real server measurements.
- **Revisiting DDIO: Is DDIO still applicable for the latest server processors?** Aug 2022 – Nov 2022
Computer Architecture for Performance and Security, Guide: Prof. Biswabandan Banda
 - Thoroughly analyzed Data Direct I/O (DDIO) technology in the memory hierarchy of modern server.
 - Implemented and evaluated DDIO with traditional I/O for TCP/IP network packets in simulator for modern systems with high level of parallelism.
- **Implementation of Timing Channel Attacks and its mitigation** Aug 2022 – Nov 2022
Computer Architecture for Performance and Security, Guide: Prof. Biswabandan Banda
 - Implemented covert and side channels using cache Flush+Reload attacks.
 - Achieved 98% accuracy at throughput of 250 bps with our covert channel.
 - Mitigated cache channel attacks by implementing process level isolation on first cache access.

RELEVANT COURSEWORK

- **IIT Bombay:** Design and Engineering of Computing Systems, Topics in Virtualization and Cloud Computing, Performance Analysis of Computer Systems and Networks, Computer Architecture for Performance and Security

TECHNICAL SKILLS

- **Languages:** C, C++, C#, Python, Bash, Javascript, Go, HTML/CSS
- **Tools & Libraries:** DPDK, Docker, Kubernetes, ChampSim, Unity, L^AT_EX

WORKING EXPERIENCE

- **Teaching Assistant of Operating Systems & Lab at IIT Bombay,** (Autumn 2023, 2022).
- **Teaching Assistant of Digital Logic Design and Computer Architecture & Lab at IIT Bombay,** (Spring 2022).
- **Internship on Integrated Telecom/Data Network & Cyber Security at ALTC Ghaziabad,** (July 2021 – August 2021).

AWARDS AND CERTIFICATIONS

- **Gold Medalist,** Ranked **first** in the Class of 2022, CIT Kokrajhar. (Out of 360 students)
- **CCGrid 2023,** Volunteered at CCGrid 2023, held in Bangalore, India.
- **ACM-India & ARCS 2023,** Attended the ACM-India Annual Event, 2023 & 17th ARCS, held in OIST, Bhopal, India.
- **GATE-2022,** Ranked in Top 7.19% (amongst 77,257 students) in GATE-2022 (CSE)
- **GATE-2021,** Ranked in Top 10.25% (amongst 101,922 students) in GATE-2021 (CSE).
- **Anundoram Borooah Awardee,** Award given to meritorious students by the state of Assam.