# RAMESH ADHIKARI

PhD Candidate at Augusta University
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Personal Website | Google Scholar | GitHub | LinkedIn

### **EDUCATION**

School of Computer and Cyber Sciences, Augusta University

Augusta, Georgia, USA Aug 2022 - Present

Ph.D. in Computer and Cyber Sciences

(Expecting to graduate in May 2026)

Pokhara University
Masters of Science in Computer Engineering (CGPA 3.76)

Kathmandu, Nepal 2018 - 2021

Tribhuvan University

Bachelor of Engineering in Computer Engineering (78.15%)

Kathmandu, Nepal 2013 - 2017

### **PUBLICATIONS**

### [Published]:

- Stable Blockchain Sharding under Adversarial Transaction Generation. Ramesh Adhikari, Costas Busch, and Dariusz R. Kowalski. The 36th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA 2024)
- Lockless Blockchain Sharding with Multiversion Control. Ramesh Adhikari, and Costas Busch. International Colloquium on Structural Information and Communication Complexity (SIROCCO 2023)
- Performance Evaluation of Convolutional Neural Network Using Synthetic Medical Data Augmentation Generated by GAN. Ramesh Adhikari, and Suresh Pokharel. International Journal of Image and Graphics

# [In submission]:

- Fast Transaction Scheduling in Blockchain Sharding. Ramesh Adhikari, Costas Busch, and Miroslav Popovic. preprint
- Stable Blockchain Sharding under Adversarial Transaction Generation. Ramesh Adhikari, Costas Busch, and Dariusz R. Kowalski.
- Transaction Processing in Blockchain Sharding: Current Trends and Future Research Directions. Ramesh Adhikari, Costas Busch, and Dariusz R. Kowalski, Abdullah Al-Mamun
- Transaction Scheduling in Fog-Cloud and Beyond. Ramesh Adhikari, Costas Busch, and Pavan Poudel.

### RESEARCH EXPERIENCE

Graduate Research Assistant | Augusta University | Augusta, Georgia, USA

Aug 2022 – Present

Working on the distributed algorithm and blockchain technology, mainly on sharding in blockchain to solve the scalability issue.

Graduate Student | Nepal College of Information Technology | Kathmandu, Nepal

2020 - 2021

Worked on machine learning and deep learning projects under faculty members to complete master's research.

### PROFESSIONAL EXPERIENCE

Software Engineer | Sanima Bank | Kathmandu, Nepal

May 2019 - Jun 2022

- Developed web applications for commercial banks.
- Integrated API and web services.
- Developed Batch Script and SQL query to automate the process.

Software Engineer | SmartMobe Solutions Pvt. Ltd | Kathmandu, Nepal

Feb 2018 - April 2019

- Collaborated with a 30-member team to develop cutting-edge APIs for mobile and web apps.
- Researched new tools and technologies, implementing improvements for efficiency and automation.

# PRESENTATION EXPERIENCE

## Paper Presentation:

- 36th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA 2024) in Nantes, France (Jun 2024).
- 30th International Colloquium on Structural Information and Communication Complexity (SIROCCO), Spain (Jun 2023).

# Poster Presentation:

- 3rd annual workshop on Emerging Data Science and Cyber Data at Augusta University, USA (Mar 2023).
- 40th Annual Graduate Research Day at Augusta University, USA (Mar 2025).

## **Invited Talk:**

- Electrical Engineering and Computer Science (EECS) Department at Syracuse University, USA (Nov 2024).
- School of Computer and Cyber Sciences Department a 33Augusta University, USA (Nov 2024).

# ACADEMIC AWARDS, FELLOWSHIPS & SCHOLARSHIPS

- \$1,000 NSF Student Travel Awards from SPAA 2024 conference (June 2024).
- \$1,000 travel award from the Graduate School, Augusta University (April 2024).
- \$650 NSF Student Travel Awards for CANS conference (Nov 2023).
- \$1,000 travel award from the Graduate School, Augusta University (Mar 2023).
- \$100 NSF travel award to attend the 3rd Data Science Workshop at Augusta University (Feb 2023).
- \$340 NSF travel award to attend the (DISC) conference (Oct 2022).
- Star Performance Excellence Award at Sanima Bank Ltd (2021).
- Granted a full scholarship for a Master of Science in Computer Engineering from Pokhara University (2018).

### ACADEMIC SERVICE

### **Reviewer Journals**

- Invited Reviewer, IEEE Transactions on Green Communications and Networking (2024).
- External Reviewer, Journal of Network and Computer Applications (2024).
- External Reviewer, Blockchain: Research and Applications (2024).
- External Reviewer, IEEE Transactions on Mobile Computing, (2024).
- External Reviewer, IEEE Transactions on Network and Service Management (2022).

### Reviewer Conferences

- Invited Reviewer,  $43^{rd}$  ACM Symposium on Principles of Distributed Computing (PODC 2024)
- External Reviewer, 7<sup>th</sup> IEEE International Conference on Blockchain (Blockchain 2024)
- Invited Reviewer, ACM SIGMIS Computers and People Research 2024 (SIGMIS CPR 2024)
- Invited Reviewer, 31<sup>st</sup> International Colloquium On Structural Information and Communication Complexity (SIROCCO 2024)
- External Reviewer, The 6<sup>th</sup> IEEE International Conference on Blockchain (Blockchain 2023)

### ACHIEVEMENTS AND PARTICIPATION

- Participated in International Conference on Cryptology and Network Security (CANS) (Nov 2023).
- Attended The Southeast Regional Programming Languages Seminar 2023 (Oct 2023).
- Attended the International Symposium on Distributed Computing (DISC) conference (Oct 2022).
- Served as a member of the Kathford FOSS Community at Kathford International College.
- Achieved First Runner-Up in a software competition at Kantipur Engineering College (2015).

# SKILLS

**Programming languages, Libraries, Tools:** Python | Go | C | C++ | JavaScript | PHP | Tensorflow | MySQL | SQL server | Shell Scripting.

**Broad Skills:** Distributed Algorithm | Distributed System | Blockchains | Algorithmic Analysis | Web Scraping | Database Design | Machine Learning | Cloud Computing | Problem Solving.