

# Shaibal Saha

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 [LinkedIn](#) |  [GitHub](#) |  [Google Scholar](#)

Auburn Hills, Michigan - 48326, USA

## EXPERIENCE

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### ■ Oakland University

September 2022 - Present

Graduate Research Assistant

Rochester Hills, USA

- Conduct research on optimization techniques for deep neural networks in Edge environments to enhance performance and efficiency.
- Implement and analyze new model compression techniques, including pruning and quantization, for transformers and hybrid models for generalized application/domain-specific applications.
- Conduct research on medical imaging task optimization techniques for heterogeneous platforms such as FPGA, Jetson Nano, and Nvidia AGX Orin.
- Study multi-modal detection models for Autonomous Driving Systems, focusing on hardware/software co-design for optimized deployment.
- **Frequently used tools:** Pytorch, Tensorrt, Vitis-AI, Vaitrace, Numpy, Pandas, CUDA

### ■ Code Aristos

January 2019 - June 2022

Software Developer

Dhaka, Bangladesh

- Started as an intern (Jan 2019 - Apr 2019) and transitioned to a full-time role due to strong performance.
- worked on Hospital Management ERP for large-scale data handling for both web and mobile apps.
- Provided real-time client support to bug fixes for live systems all across the world.
- Designed and implemented robust backend functions for multi-level user access and customization based on client needs.
- **Frequently used tools:** Codeigniter, Django, Flutter, MongoDB, MySQL, Azure, Apache

## EDUCATION

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### ■ Oakland University

September 2022 - Present

PhD Student, Department of Computer Science and Informatics

Rochester Hills, USA

CGPA: 4.00 / 4.00

### ■ North South University

January 2014-August 2018

Bachelor of Science in Computer Science and Engineering

Dhaka, Bangladesh

CGPA: 3.44 / 4.00

## RESEARCH INTEREST

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Edge Computing, Model Optimizations, Deep Learning, Connected Health, Autonomous Vehicles

## PUBLICATIONS

C=CONFERENCE

- [C.1] Yunge Li, **Shaibal Saha**, Lanyu Xu (2024). The Architectural Implications of Multi-modal Detection Models for Autonomous Driving Systems. In *IEEE International Conference on Mobility: Operations, Services, and Technologies 2024 (MOST 2024)*, DOI: 10.1109/MOST60774.2024.00030o
- [C.2] Ronald Tudu, **Shaibal Saha** , Prasun Nandy Pritam and Rajesh Palit (2018). Performance Analysis of Supervised Machine Learning Approaches for Bengali Text Categorization. In *2018 5th IEEE Asia-Pacific World Congress on Computer Science and Engineering (APWC on CSE)*, DOI: 10.1109/APWConCSE.2018.00043

## SKILLS

- **Programming Languages:** [Expert] Python, PHP, VHDL  
[Moderate] C, C++, Javascript
- **Web Technologies:** Django, Codeigniter, Laravel, CSS, HTML
- **Database Systems:** MySQL, NoSQL(MongoDB), Oracle
- **Tools:** Jupyter, PyTorch, TensorFlow, Tensorrt, Pandas, , NumPy, Scikit-learn, Vaitrace
- **Other Technologies:** Vitis-AI, Vivado Design suite, Microsoft Azure,Apache
- **Hardware used:** GPU, FPGA, Jetson Nano, Nvidia AGX Orin
- **Completed Courses:** Advanced Data Structure and Algorithms, Computer Architecture, Database System, Cloud Computing, Embedded System Design Using FPGAs, Component-based software engineering.

## PROFESSIONAL EXPERIENCE

- Reviewer of Journal of Ambient Intelligence and Smart Environment [2023-Present]

## HONORS AND AWARDS

- NSF Student Travel Award for attending IEEE MOST 2024
- Bangladesh-Sweden Trust Fund (BSTF)- Travel Grant 2023
- NSF Student Travel Award for attending IEEE/ACM SEC 2023
- NSF Student Travel Award for attending IEEE/ACM CHASE 2023
- Oakland University Provost Graduate Student Research Award grant - Spring 2023
- Selected for university special scholarship at the undergraduate for maintaining good result
- Government Scholarship for junior and Secondary level

## LEADERSHIP EXPERIENCE

- **ACM Student Chapter** September 2024 - Present  
Oakland University [President]
- **ACM Student Chapter** September 2023 - August 2024  
Oakland University [Treasurer]

## PROFESSIONAL MEMBERSHIPS

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- **ACM Student Membership**, Membership ID: 9727002 *March 2023 - Present*
- **IEEE Graduate Student Member**, Membership ID: 99950844 *December 2023 - Present*
- **IEEE Young Professionals**, Membership ID: 99950844 *December 2023 - Present*

## ADDITIONAL INFORMATION

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**Languages:** English (Fluent), Bangla (Native), Hindi (Professional)

**Interests:** Cricket, Traveling, Historical and Cultural Documentary.