

# NAMRATA SAHA

Website: <https://solidlab.network/people>

## EDUCATION

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### Ph.D. in Computer Science

*Aug. 2020 - Present*

Knight Foundation School of Computing and Information Science

Sustainability, Optimization, and Learning for InterDependent networks laboratory (**solid lab**)

College of Engineering and Computing, Florida International University

Ph.D. Co-Advisors: **Dr. M. Hadi Amini** and **Dr. Shabnam Rezapour**

Ph.D. Dissertation Topic: Deep Reinforcement Learning: Theory and Applications

### Bachelor of Science in Computer Science and Engineering

*2014 - 2018*

Military Institute of Science and Technology

## HONORS AND RECOGNITION

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1. Awarded **Travel grant** from FIU Graduate and Professional Student Committee (GPSC).
2. Awarded 4-year **Doctoral Scholarship** from Florida International University.

## HIGHLIGHTS

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- Presented my research work titled "Reinforcement Learning - Based Control Systems For Networked Power Infrastructures" in **Inform's Annual Meeting 2021**
- Profound knowledge on the state-of-the-art **Computer Science, Machine Learning, and Data Science** concepts
- Working on design and analysis of experiments to investigate deep learning models in control system

## RESEARCH INTERESTS

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- **Machine Learning and Data Mining** (Deep Reinforcement Learning, Neural Network, Multi-Agent Reinforcement Learning, Data analytics).
- **Operation Research** (Stochastic optimization, Resilient Network Infrastructure, control system, energy systems).

## SELECTED PROJECTS (DURING PHD)

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### Reinforcement Learning - Based Control Systems For Networked Power Infrastructures:

We employed Reinforcement Learning (RL) techniques to design a control system to enhance coordination among facilities and minimize the power production cost. The developed control mechanism is tested for different loads (residential, commercial and industrial).

## TECHNICAL STRENGTHS

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**Programming language**

C, Python, Java

**Web based skills**

node js, javaScript, bootstrap, CSS, HTML

**Database Management Systems**

Oracle, Microsoft SQL Server, MySQL

**Development tool**

PyCharm, Anaconda, Microsoft Visual Studio, Android Studio

**Other App**

LATEX, PowerBI, MATLAB

## WORK EXPERIENCE

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**Sustainability, Optimization, and Learning for InterDependent networks laboratory [solid lab]**

August 2021 - Present

*Graduate Assistant*

- Leading the agent-based decision-making in power system project.
- Present our research works in different conference and seminars.

**Loosely Coupled Technology**

2019-2020

*Data Scientist*

- Enhancing data collection procedures to include information that is relevant for building analytic systems
- Web scraping
- Generating and Analyzing insight reports

**Loosely Coupled Technology**

2018-2019

*Executive Associate*

- Executed test plans and report results, identified and reported bugs to line manager
- Tested mobile application(Android) features and API using restlet and postman

**SELECTED PUBLICATIONS (DURING PHD AT FIU:)**

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1. **Namrata Saha**, Shabnam Rezapour, and M. Hadi Amini. "Reinforcement Learning - Based Control Systems For Networked Power Infrastructures" in International Conference on Computational Science and Computational Intelligence (2021).

**PROFESSIONAL ACTIVITIES (DURING PHD AT FIU)**

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**Machine Learning Researcher:** Working as the machine learning researcher at solid lab to design and analysis deep reinforcement learning algorithm to intellectualize interactions among Interdependent Critical Infrastructures.