Samin Yasar Chowdhury

Security in AI Enthusiast

Willing to expand the area of expertise by employing necessary skills in projects that have practical applications in security of embedded systems. Aim to employ logical approaches to solve problems through the innovative approach of applications of various tools in software systems.

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EDUCATION

PhD in Computer Science
Florida International University

08/2022 - Present   *GPA: 3.8 / 4.00*

BS in Computer Science and Engineering
North South University

05/2014 - 04/2018   *GPA: 3.51 / 4.00*

WORK EXPERIENCE

GRADUATE TEACHING ASSISTANT
Florida International University

08/2022 - Present
Achievements/Tasks

- Conducting research in PLC security
- Explaining course work to students
- Preparing lab materials for students

NETWORK PLANNER
C&A Services GmbH

06/2021 - 08/2022
Achievements/Tasks

- Designing simulation environment according to requirements for stores
- Simulating, evaluating and processing the Access Points with Ekahau and configuring Access Points
- Generating reports and feedback

RESEARCH ASSISTANT
LFO, TU DORTMUND

01/2020 - 05/2021
Achievements/Tasks

- Comparing OCR techniques for Vehicle License Project
- Job Shop Scheduling for a logistic house with ML
- Preparing tutorial lessons for Data Analytics

SAP BUSINESS TECHNOLOGY ANALYST
EITEKH CONSULTING

12/2018 - 08/2019
Achievements/Tasks

- Design, prototyping, and configuration of SAP Production Planning module
- Preparing process flow diagrams and specifications.
- Deliver custom reports, interfaces, workflows and apps

TECHNICAL SKILLS

Python, C, C++ | Numpy, Pandas, d3js | OpenPLC
AFL++ Fuzzer | MySql, Oracle | Flask, Bootstrap
Docker | PHP, JavaScript | Git | Jupyer Notebook

PERSONAL PROJECTS

Honeypot for PLC Devices (01/2023 - 05/2023)

- PLCHoney a honeypoy is to act as a honeypot for PLCs
- Emphasizes a cost-effective approach in addressing the challenges associated with PLC honeypots (e.g. vendor-specific implementation, configuration, extensibility, and scalability)
- Utilizes dockerized virtual PLCs as part of the honeypot infrastructure
- **Published Work:** Chowdhury, Samin Y., Brandon Dudley, and Ruimin Sun. "The Case for Virtual PLC-enabled Honeypot Design." 2023 IEEE European Symposium on Security and Privacy Workshops (EuroS&PW). IEEE, 2023.

Job Shop Scheduling with RL and Visualization (07/2020 - 05/2021)

- Implemented Reinforcement Learning for faster decision making for scheduling
- Finding optimized path for a tasklist with limited resource
- Visualizing results in a Flask webapp with D3js

Autnomous Robot (09/2017 - 04/2018)

- Built an autonomous robot implementing Simultaneous Localization and Mapping(SLAM) algorithm
- Developed a robot which creates a 2D map and localizes itself simultaneously as it moves through an unknown environment to reach a specified destination avoiding obstacles in its planned route
- Used Robot Operating System (ROS) running on top of Ubuntu

Fall Detection Device (09/2016 - 02/2017)

- The device was able to identify the phenomenon with Force Sensitive Resistor (FSR) and couple it with posture detection through IMU to reach a conclusion.

PERSONAL TRAITS

Interpersonal Communication

Problem solving

Adaptablity

INTERESTS

Ukulele | Music | Travel