

Oyonika Samazder

Fredericton, New Brunswick

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EDUCATION

University of New Brunswick

Master of Computer Science (Thesis: Privacy Preserving Mobile Computation)

Fredericton, NB

January 2021 - present

National Institute of Technology, Kurukshetra

Bachelor of Technology (Computer Engineering)

Haryana, India

July 2015 - April 2019

KEY SKILLS

Languages C/C++, Python, Javascript, HTML/CSS, MySQL

Technologies Firebase, Docker, GitLab CI/CD, Git, CMake, VSCode, Android Studio, GraphQL, L^AT_EX

PUBLICATIONS & PRESENTATIONS

ZTSGrid: A Zero-trust Approach for the SCADA System in the Smart Grid

August 2022

- Presented at the 19th Annual International Conference on Privacy, Security & Trust (PST'22) at Fredericton, NB
- Proposed a theoretical SCADA model that adopts the NIST zero-trust model with authentication, authorisation, identity and access management using tools like TLS/SSH, Auth0, Cloud IAM, OneLogin, OAuth2 and SAML

ACADEMIC PROJECTS

DetActivity (Bachelors Final Year Project)

Aug 2018 - April 2019

- Developed an Android app using Java for Human Activity Recognition (HAR) that used tri-axial smartphone accelerometers to collect data based on the user's activity and predict their fitness levels
- Modelled the human activity recognition using an LSTM Neural Network implemented in Python's TensorFlow

EXPERIENCE

NB Power Research Team, Canadian Institute for Cybersecurity

Fredericton, Canada

Graduate Research Assistant

Jan 2021 - present

- **Project:** Cyberattack Resilient and Privacy-friendly Smart Grid
- **Technologies:** Linux, Shell Scripting, Python, SQLite, CMake, VScode, Git
- Designing and developing a full-scale end-to-end secure smart grid simulation using data transfer protocols such as Modbus, SNMP and DNP3 and AES-256 encryption

Faculty of Computer Science, University of New Brunswick

Fredericton, Canada

Graduate Teaching Assistant

Aug 2020 - Aug 2021

- CS6411: Fundamentals of Information Assurance, CS6417: Software Security, and CS6419: Digital Forensics
- Responsibilities included grading assignments, reviewing code, assisting in labs and tutorials, moderating class presentations and answering queries related to cryptographic primitives, malware analysis and software security

WedMeGood Pvt. Ltd.

Gurgaon, India

Software Engineer

Jun 2019 - Aug 2020

- **Technologies:** Linux, React.js, Angular.js, Node.js, MongoDB, Express, HTML/CSS, Git, Bash Shell Scripting
- Developed enhancements and resolved defects/bugs impacting the mobile and desktop web app of WedMeGood
- Worked with cross-functional teams to ensure fulfilment of product requirements, evaluated product performance and transitioned patches from development to deployment
- Formulated test cases, developed change requests, refactored legacy PHP/Vue.js code and fixed multiple bugs
- Designed and developed in-house products such as Mynt, a membership-based program for special offers with premium brands and WMG Genie, a service that curates a personalized list of vendors for online customers
- Integrated third party applications such as Userlike Chat and Clevertap sitewide to improve customer experience

AWARDS AND ACHIEVEMENTS

- Research fellowship grant of 24,000 CAD/yr with Canadian Institute for Cybersecurity, Jan 2021 - present
- Elected as the Secretary of UNB Computer Science Graduate Students Association, April 2022 - present

EXTRA-CURRICULAR ACTIVITIES

- Volunteered at "Let's Talk Science", Fredericton chapter, September 2022 - present
- Volunteered to teach Spoken English to middle school students in a school in rural parts of Kurukshetra
- Started a menstrual hygiene awareness initiative in collaboration with Paree, a sanitary napkin manufacturer

INTERESTS

- Writing poetry
- Swimming

- Learning languages
- Playing the ukulele