# Oyonika Samazder

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## KEY SKILLS

**Languages:** C/C++, Python, Javascript, HTML/CSS
**Libraries/Frameworks:** NodeJS, ExpressJS, ReactJS, JSON, Bootstrap
**DevOps Tools:** Jenkins, Git, GitHub, GitLab, CI/CD Pipeline
**Database:** MySQL, SQLite3, GraphQL, NoSQL, MongoDB, Firebase
**Cloud Technologies:** Amazon Web Services (AWS), Heroku
**Miscellaneous:** SOLID Principles, Unit Testing, Agile Model, REST APIs, SDLC, Object-Oriented Design, Refactoring Techniques, LaTeX

## EXPERIENCE

**The Gregg Centre for Study of War and History, University of New Brunswick** **Fredericton, Canada**
*Part-Time Front End Developer* *Feb 2023 - present*

- **Project:** Veterans Affairs Canada - In Service of Canada
- **Technologies:** React.js, Redux.js, Javascript
- Working in collaboration with the Department of History at the University of New Brunswick to build the Veterans Affairs Canada platform.

**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 2021 - Aug 2022*

- 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
- Integrated third party applications such as Userlike Chat and Clevertap sitewide to improve customer experience

## EDUCATION

**University of New Brunswick** **New Brunswick, Canada**
*Master of Computer Science (Thesis: Privacy Preserving Mobile Computation)* *January 2021 - present*
Research and Development of a scalable and adaptable privacy-preserving data sharing and aggregation system between mobile devices, the cloud server and other devices with low computational power

**National Institute of Technology, Kurukshetra** **Haryana, India**
*Bachelor of Technology (Computer Engineering)* *July 2015 - April 2019*

## 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 using LSTM

## 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