

Sourov Jajodia

+880 1752612637 | sourov.jajodia72@gmail.com | 1705072@ugrad.cse.buet.ac.bd
<https://sourov72.github.io> | [LinkedIn](#) | [GitHub](#)

EDUCATION

Bangladesh University of Engineering & Technology

Bachelor of Computer Science and Engineering
Department of Computer Science and Engineering

April, 2018 – May, 2023

CGPA: 3.77/4.00

Birsreshtha Noor Mohammad Public College

Higher Secondary Certificate (HSC)
Division of Science

July, 2015 – July, 2017

GPA: 5.00/5.00

PUBLICATIONS

22nd IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2022)

An Empirical Study of Code Smells in Transformer-based Code Generation Techniques, Mohammed Latif Siddiq, Shafayat Hossain Majumder, Maisha Rahman Mim, **Sourov Jajodia**, and Joanna C. S. Santos

RESEARCH EXPERIENCE

University of Notre Dame, Indiana, USA

Detection of Code Smells in Transformer-based Code Generation Models
Voluntary Student Research Assistant

March, 2022

- Volunteered for **S²E lab** on a research work for detecting **code smells in transformer-based code generation datasets**, and to determine how it impacts the code generation model as a whole.
- Analyzed, parsed & categorized code smells for nearly **0.7 million files** using tools like **pylint & bandit**.
- **Wrote flex & python scripts** to detect & categorize code smells.
- **Published a paper** on the findings in **SCAM 2022 research track**.

Concordia University, Montreal, Canada

Cloud Security
Voluntary Student Research Assistant (Ongoing)

May, 2022

- Collaboration project on **security & vulnerability of cloud technologies**, specifically Docker.
- Performed **dissection of docker images** to analyze its contents.
- Analyzing & testing various vulnerability detection methods, and performing literature review.

Bangladesh University of Engineering & Technology, Bangladesh

Security & Privacy of Blockchains
Student Research Assistant (Ongoing)

May, 2022

- Undergraduate research on **security & privacy of blockchains**, especially drug supply chain blockchains.
- Studied various blockchain networks extensively, including various **consensus protocols, fault tolerance mechanisms, connectivity protocols, network operation, anonymity, authenticity** etc.
- **Implementing test blockchain network** for understanding the network's various operations.

ACADEMIC PROJECTS

Contest.io: Online Contests Hosting Platform Node.js, Express.js, React.js, MongoDB

August, 2022

Created an *online voting and contest hosting solution* that aims to make contest hosting and vote management easier for **various types of contests**; e.g., Photo, video, polls etc. Also includes various **privacy and security features** such as **anonymity** of voters, **selecting & blocking** participants, **contest types** according to varying

privacy features. Performed extensive **requirement analysis, system design phase** prior to building the said software.

February, 2022

Improvement of TCP Reno Congestion Control Algorithm Network Simulator 3(NS3), C, Python, GNUPlot

Here I have tried to improve the existing TCP Reno Congestion Control Algorithm. And then compared the throughput, packet losses calculated from the implemented algorithm with the New modified Algorithm. The modified algorithm was tested and simulated using Network Simulator 3(NS3).

Toll Management System (with Unified Payment Integration) Python, Django REST, React.js, Oracle SQL

February, 2022
[GitHub](#)

Designed a toll collection & management system **with a team of 6 people**. Went through an extensive **requirement analysis, system design & documentation phase** for developing the said software. Generated in the process: **BPMN, Mock UI, Class & ER, Interaction & State diagrams**.

Smart Cart C, AtMega32, Atmel Studio, Proteus 8, Arduino

July, 2021
[Demo Video](#)

Prototyped an autonomous cart that **follows a point-of-interest** by **auto collision avoidance** with a **team of 4 people**. Designed a fully functional software simulation and later, built a working hardware prototype.

Hotel Management System Django, Bootstrap, Python, Oracle SQL

December, 2020
[GitHub](#), [Demo Video](#)

Developed a prototype hotel management system on the web with full functionality with a **team of 2 people**. The database of the project was **designed extensively following the relevant ER diagrams**.

Dynamite District: Java-Based Multiplayer Game Java, JavaFX

January, 2019
[GitHub](#), [Demo Video](#)

Developed a multiplayer shooting game playable over a WLAN network. **Built using OOP principles & server-client networking**. Supports collision & game physics inside a **2D map**.

A Book Shop Library C, iGraphics Custom Library

July, 2018

Developed a simple book shop app, where the customer can create an account, buy books, return books. The owner can add new books in the library, change prices of existing books, see customers list etc.

SKILLS

Languages	Java, Python, C, C++, SQL, Shell, JavaScript
Databases	Oracle, MySQL, MongoDB, Firebase
Frameworks	Django, JavaFX, React.js, Express, Node.js
Web Technologies	HTML, CSS, BootStrap, JSON
Cloud Technologies	Docker, Kubernetes
Technical Writing	LaTeX, Beamer, Overleaf
Problem Solving	CodeForces, SPOJ
Testing	JUnit, GDB
Operating Systems	Windows, Flavors of Linux (Ubuntu, Linux Mint, Kali), ChromeOS
Others	Git (GitHub), NS3, XV6, GNUPlot, OpenGL

ACHIEVEMENTS

University Cyber Drill 2022

National CTF Competition, Uni: 3rd, National: 21st

Technical Scholarship (2017-2023)

Scholarship for outstanding engineering students

College Final Examination (2016)

Straight As, **merit position** 7 in whole college

Dean's Award, BUET (2020, 2021)

For outstanding academic performance

Government Scholarship, Bangladesh (2015-2017)

For outstanding performance in Secondary School Certificate Examination

HIGHLIGHTED ACADEMIC COURSES

Undergraduate Courses, Bangladesh University of Engineering and Technology

- CSE-405 Computer Security
- CSE-423 Fault Tolerance Systems
- CSE-453 High Performance Database Systems
- CSE-471 Machine Learning

LANGUAGES

English

Fluent

Bangla

Native

Hindi

Listening, Speaking

PERSONAL INFORMATION

Name

Sourov Jajodia

Bengali Name

সৌরভ জাজোদিয়া

Nationality

Bangladeshi