Rudranil Maity

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EDUCATION

New Jersey Institute of Technology — Newark, NJ
Master of Science in Cyber Security and Privacy, Cumulative GPA: 3.42 — *Sep. 2022 - Present*

Netaji Subhash Engineering College — Kolkata, India
Bachelor of Technology in Computer Science, GPA: 3.52 — *Aug. 2018 - July 2022*

PROFESSIONAL EXPERIENCE

Tutor (Computer Science, Matlab and Physics) - EOP: NJIT — June 2023 - Present
New Jersey Institute of Technology — *Newark, NJ*
- Tutoring incoming college students on campus through solving their queries on problems related on over 5 subjects.
- Assisting students in solving complex problems from Sears and Zemansky's University Physics.
- Mentoring 30+ students in learning Python and Matlab basics while helping in programming assignments.

Teaching Assistant: Data Mining — May 2023 - Present
New Jersey Institute of Technology — *Newark, NJ*
- Assisting in managing the graduate course for CS634; through grading of assignments and projects included in the syllabus.
- Giving feedback and managing timely submissions through announcements and focusing on improving students' performance regarding course projects which implements Python Apriori Algorithm to Relational Databases.

ReactNative Android Developer — Jan 2022 - Feb 2022
SPLIT Chennai — *Chennai, India*
- Debugged crucial issues by fixing improper adjustment in the time stamp in the front-end of an android application.
- Streamlined project deployment by implementing SCRUM methodologies and GitHub for project management.
- Achieved timely delivery by collaborating with cross-functional teams, providing updates through JIRA tickets.

Web Development Intern — Nov 2020 - Jan 2021
OnePercent Pvt Ltd — *Bangalore, India*
- Oversaw the successful completion of a job search application website, leading a team of three individuals.
- Undertook ReactJS as the primary administrator of the project, managing and debugging the front-end components.
- Assured on-time delivery by managing the deadline through meetings and collaborations with the back-end team.

PATENT & PROJECTS

Patent: Light Fidelity (LIFI) Based Data Transfer Device For Mobile Phone — Published - May 2023
- Developed the first-ever android application for Light Fidelity-based encrypted data transfer over void medium.
- Achieved over 100 times increment in speed of secured transfer with Li-Fi over the conventional methods.
- Leveraged reactNative, using intensity-controlled flashlight as a source and infrared sensor as a receptor.
- Design no: 363174-001; CBR: 200974 and class 14-02. Published in the Journal of Intellectual Properties India.

A Progressive Approach Towards Securing Hospital Networks from Packet Sniffing Using Wireshark
- Presented my conference paper; focused on network security, primarily packet sniffing with Wireshark.
- Enlighted the effects of recent threats in hospital networks; with Wireshark and a demo FTP server.
- Presented at the International Conference on Advancements in Interdisciplinary Research, at Prayagraj, India.

Buffer Overflow on Various Programs — Jan 2023 - April 2023
- Exploited multiple vulnerabilities to bypass the canary value through buffer overflow by using penetration testing techniques on the disassembly of a x86 assembly program in GDB.
- Analyzed ways to get secured from those vulnerabilities by recommending use of ASLR, DEP and Stack Smashing protection on Linux Distributions; as well as implementing SIEM and IDS.

Detection of Weak Passwords Against Pre-Computed Dictionary Attack — Oct 2022 - Nov 2022
- **Course Project:** Developed a program in Java which detects weak salted passwords over a dictionary attack.
- Completed a successful brute force over a database with the "rockyou.txt" file; containing over 5 million passwords.

Team Leader: *TALENT ARCHIVES* (A freelancing website for artists) — Jan 2022 - April 2022
- Led a team of four individuals in developing a full-stack (ReactJS, NodeJS and MongoDB), e-commerce platform tailored towards artists as part of a final-year group project at Netaji Subhash Engineering College.
- Undertook SDLC and CI/CD Pipelines concept for timely completion and spearheaded presentation by leveraging the project's functionalities through ER Diagrams and DFDs.

TECHNICAL SKILLS

Java, Python, C++, JavaScript(ReactJS, NodeJS, AngularJS, ExpressJS), x86 Assembly, HTML/CSS, Cryptographic Algorithm, Cryptanalysis, SIEM, PKI Concepts, NIST Standards Concepts, Network Security, Firewall, IDS, DNS, OSI Layers, TLS/SSL, LDAP, VPN, IPSec, VLAN, MPLS, FTP, Privilege Escalation, Kali Linux Tools(Wireshark, BurpSuite, Ettercap, John the ripper etc.), Penetration Testing, Databases(Relational Databases, MySQL, MongoDB), Git and GitHub, CI/CD Pipelines, JIRA, Linux Distributions, Segment Routing, Object-Oriented Programming.