RUDRANIL MAITY

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EDUCATION

New Jersey Institute of Technology	**September 2022 - May 2024**
Master's, Cyber Security & Privacy	*GPA: 3.5*

Netaji Subhash Engineering College	**August 2018 - July 2022**
Bachelor's, Computer Science	*GPA: 3.44*

SKILLS

Skills: Java, Python, Cryptography, React.js, React Native, Node.js, Golang, JIRA, JavaScript, Android Development, AngularJS, BGP, AWS, Computer Networking, Django, Docker, jQuery, Linux/Unix, .NET, NumPy, Operating Systems, REST APIs, TCP/IP, Web Development, computer architecture, Splunk, DNS, HTTP, SaaS, Bash Scripting, Unix, AWS, PowerShell, Git Bash, NIST 800-53, security hardening, exdpoint security, compliance, Nessus, Nmap, Prism, debugging, OWASP Top Ten, Patch Management, PCI-DSS, SOX, Active Directory, Bash, Access Management, SDLC, data processing, Data Analysis, information technology, SOC operations, Ticket Management, Social Enginering Attacks

PROFESSIONAL EXPERIENCE

New Jersey Institute of Technology — **Newark, NJ, USA**
Graduate Teaching Assistant – Machine Learning — *May 2023 - Present*
- Managing the graduate course for DS675; 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 and assignments which implements various ML concepts, ranging from Bayesian classification to Recurrent Networks, regression etc.

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

SPLIT Chennai — **Chennai, Tamil Nadu, India**
ReactJS Developer Intern — *January 2022 - February 2022*
- 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.

PROJECTS & OUTSIDE EXPERIENCE

Vulnerability Analysis of Android apps using MITMproxy, Frida & Objection — **Newark, NJ, USA**
October 2023 - December 2023
- Performed dynamic analysis of popular Android apps using MITMProxy, Frida, and Objection along with Powershell to intercept encrypted HTTPS traffic and identify unauthorized data sharing with third-party servers.
- Traced device data and usage statistics being transmitted without encryption to advertising and analytics servers at high frequencies up to 15 requests/second.
- Identified apps transferring plaintext authentication credentials over the network and suggested mitigation strategies for users, developers, and app marketplaces to strengthen privacy protections against unauthorized data transfer (Report: https://medium.com/@rudranilmaity01/network-traffic-analysis-of-android-apps-using-mitmproxy-and-frida-afb69afc389f).

Buffer Overflow | x86 assembly, Cryptanalysis, Privilege Escalation, Incident Response, Linux — **Newark, NJ, USA**
January 2023 - May 2023
- Mitigated multiple vulnerabilities in x86 assembly programs throughout the project with GDB in Ubuntu.
- Utilized GDB in multiple Linux distributions to inspect disassembly of codes in runtime.
- Analyzed with Social Engineering Toolkit; finding ways to get secured from those vulnerabilities with ASLR, DEP and Stack Smashing protection on Linux Distributions; as well as implementing SIEM and IDS.

Detection of Weak Passwords | Java, Code Hardening, Hashing, PKI and HIPAA Concepts — **Newark, NJ, USA**
October 2022 - November 2022
- Course Project:Developed a program in Java which detects weak salted passwords over a dictionary attack.
- Performed a successful brute force attack on a database with the "rockyou.txt" file; containing over 5 million texts; later carried the attack to more intensity with "weakpass" databases; containing over 40 million passwords.

Patent: Light Fidelity (LIFI) Based Data Transfer Device For Mobile Phone — **Kolkata, West Bengal, India**
Lead Developer — *February 2022 - 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.
- Levereged 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.