

Avijit Roy

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Blending data, AI, and cybersecurity to build ethical, human-centered technology that informs, protects, and empowers.

EDUCATION

John Jay College of Criminal Justice, City University of New York — New York, NY	06/2026
Master of Science in Digital Forensics & Cybersecurity GPA: 3.8/4.0	
John Jay College of Criminal Justice, City University of New York — New York, NY	06/2021
Bachelor of Science in Computer Science & Information Security GPA: 3.96/4.0 Honors: Dean's List, Leonard E. Reisman Medal	
Leadership: Student Government Graduate Rep • VP International Students Association	

SKILLS

Digital Forensics & Cybersecurity: Evidence Preservation, Chain of Custody, Autopsy, FTK, Incident Response, Log Analysis, Splunk (SIEM), SOC Analysis, Vulnerability Assessment, Risk Mitigation, Firewall & IDS/IPS, Wireshark, Tshark, Bash, NIST, CIS Benchmarks
Software & Systems Development: C++, C#, .NET, SQL, RDBMS, JavaScript, React, Node.js, HTML/CSS, Python, Django, Git
Data Science, AI & Cloud: NLP, Machine Learning, Tableau, Data Visualization, R, Responsible AI, AWS, GCP, Excel VBA, Power Automate

EXPERIENCE

Adjunct Lecturer CUNY John Jay College of Criminal Justice — New York, NY	08/2025 – Present
<ul style="list-style-type: none">Teach Object-Oriented Programming in C++, emphasizing problem-solving, and system-level logicMentor students in code analysis and version control, reinforcing technical rigor and communication	
Data Analyst The City University of New York — New York, NY	07/2024 – Present
<ul style="list-style-type: none">Analyze large datasets using SQL and Python to uncover insights, detect anomalies, and inform executive decision-makingDevelop automated dashboards and compliance reports to monitor SEVIS and enrollment data integrity across CUNY campusesDocument analysis procedures and maintain adherence to data governance standards, ensuring accuracy and accountability	
AI Research Assistant Research Foundation of The City University of New York — New York, NY	06/2025 – 08/2025
<ul style="list-style-type: none">Conduct AI and NLP research on automated writing proficiency assessment aligned with ACTFL standardsFine-tuned transformer-based models using Hugging Face pipeline and built Gradio interface for explainable and ethical AI analysis	
University Student Records Coordinator The City University of New York — New York, NY	06/2023 – 05/2024
<ul style="list-style-type: none">Developed a C#/.NET application to automate cross-file student data comparison across Excel datasets, reducing manual verification time by 30% and generating reliable, audit-ready reportsAutomated validation and reporting workflows using VBS scripts and Excel macros to ensure record accuracyCollaborated with Registrars to translate policy rules into data-driven checks and compliance dashboards	
IT Specialist & Data Analyst The City University of New York — New York, NY	06/2023 – 05/2024
<ul style="list-style-type: none">Created SQL queries to reconcile and analyze enrollment data for 10,000+ student records across RDBMS platformsConducted data comparisons and predictive trend analyses to identify enrollment patterns and support institutional forecastingDesigned standardized Tableau and Excel templates, improving reporting efficiency by 80% across 26 campuses	

ACADEMIC AND TECHNICAL PROJECTS

- Graduate Research Assistant** – Designed a .NET Core backend and React-style admin dashboard for human-trafficking investigations; integrated Google Maps API, SignalR, and Hangfire for real-time reporting and analytics. Implemented OAuth2, RBAC, and encryption-at-rest to secure PII, and built audit-logging for data integrity monitoring.
- Network Forensics Investigation** – Reconstructed exfiltrated files from PCAP data using Wireshark, Tshark, and HxD; verified integrity via MD5 hashing, simulating corporate data-leak analysis.
- Data Exfiltration Investigation** – Analyzed forensic images containing 10,000+ files using Autopsy and metadata analysis to trace unauthorized data transfers; correlated registry, email, and activity logs to identify insider data exfiltration.
- Self-Hosted Secure Messaging Platform** – Developed an encrypted chat system using AES encryption, custom authentication, and access-control logic to demonstrate end-to-end confidentiality.
- Natural Language Processing (NLP) for Language Proficiency Assessment** – Built and evaluated transformer-based NLP models to automatically classify writing samples by proficiency level, supporting ACTFL-aligned academic evaluation research.
- Secure Single-Session Authentication System** – Mentored students on implementing concurrency-safe authentication in Django, enforcing OWASP-compliant session management and token security and built an implementation ready product.

CERTIFICATIONS

Advanced Certificate on Digital Forensics - John Jay College (2025) | Google Cybersecurity Specialization (2024) | Cisco Cybersecurity & Networking Essentials (2024) | EverUp Data Analytics Micro-Credential (2021) | EverUp Cybersecurity Micro-Credential (2021)