SHRAVANI PRANAY SAWANT

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SUMMARY

MS Computer Science (Cybersecurity) student at SIT with experience building security and privacy tools, including LLM-assisted threat detection and consent-leak tracing, and risk assessment frameworks. Currently working on reinforcement learning and AI security experimentation pipelines in a research lab. Interested in cybersecurity engineering, artificial intelligence security research, and secure backend systems, with practical experience in threat modeling, incident response, and secure application development.

EDUCATION

STEVENS INSTITUTE OF TECHNOLOGY Hoboken, NJ   Expected: May 2026
    Master of Science in Computer Science (Concentration: Cybersecurity)
    Cumulative GPA: 3.885/4.0

GOVT. INSTITUTE OF FORENSIC SCIENCE Mumbai   June 2024
    Bachelor of Science in Forensic Science (major Digital & Cyber Forensics)
    Cumulative GPA: 9.2/10.0

WORK EXPERIENCE

INTELLISYS LAB. Hoboken, NJ   October 2025 – Present
Graduate Student Research Assistant
- Studying the behavior of reinforcement learning systems under faults and partial failures, focusing on stability and performance degradation.
- Conducting controlled scaling experiments to observe how changes in system size and execution settings affect training outcomes.
- Developing experimental tooling for benchmarking and result analysis across diverse failure and recovery scenarios.
- Exploring the intersection of AI security and system reliability in fault-prone learning environments.

ACADEMIC PROJECTS

CYBERSECURITY & PRIVACY

SERI: Cyber Risk Assessment Framework for Financial Systems   Fall 2025
- Designed a structure framework to identify, categorize, and prioritize cyber risks in financial systems.
- Analyzed assets, threat vectors, and existing controls to reason about real risk exposure.
- Summarized findings using risk matrices and mitigation mappings aligned with security and compliance goals.

TrapTrack: Automated Detection of Privacy Leaks in Cookie Consent Workflows   Spring 2025
- Built a browser-based analysis tool to trace data sharing behavior before and after cookie consent on live websites.
- Used browser automation and network traffic inspection to uncover hidden third-party data flows.
- Compared consent states to surface privacy violations and unintended data disclosures.

AegisAI: LLM-Assisted Cybersecurity Detection and Threat Analysis Platform   Spring 2025
- Developed a unified security analysis platform for detecting phishing attempts, malicious files, and suspicious URLs.
- Combined rule-based detection with LLM-driven reasoning to improve confidence and contextual understanding of threats.
- Emphasized explainability by generating clear, user-facing threat summaries for non-technical audiences.

Enterprise Threat Assessment & Risk Modeling (McAfee Case Study)   Fall 2024
- Conducted a threat assessment of a large enterprise environment to identify critical assets and attack surfaces.
- Evaluated risks using confidentiality, integrity, and availability (CIA) principles.
- Proposed prioritized mitigation strategies based on risk severity and potential business impact.

SYSTEMS & COMPUTER SCIENCE

    Bankruptcy Risk Prediction Using Data Mining and Feature Analysis   Fall 2025
- Built predictive models to analyze bankruptcy risk using structured financial datasets.
- Performed feature analysis to understand which financial indicators most influence predictions.
- Compared multiple modeling approaches to study performance differences and model behavior.

    Exploratory Data Analysis and AI-Driven Insights on Suicide Trends   Spring 2025
- Analyzed large-scale datasets to identify trends across time, age groups, and geographic regions.
- Applied data visualization and basic AI techniques to uncover meaningful trends.
- Emphasized interpretability by translating analytical results into clear insights.

    CPU Scheduling Algorithms: Simulation and Performance Analysis (Java)   Fall 2024
- Implemented FCFS, SJF, and Round Robin scheduling algorithms in Java.
- Evaluated scheduling policies based on turnaround time, waiting time, and CPU utilization.
- Analyzed trade-offs between system fairness and performance efficiency.

APPLICATION DEVELOPMENT

    Full-Stack Web Application for Interactive Arrest Data Analysis   Fall 2025
- Developed a full-stack web application to explore and visualize arrest data interactively.
- Designed backend routes and APIs to support efficient querying and data filtering.
- Focused on usability and clean UI to enable intuitive data exploration.

    AI-Powered Heritage Search Engine with Semantic Retrieval and Chatbot Interface   Fall 2024
- Built a search system combining keyword matching with semantic similarity.
- Integrated a chatbot interface to answer user queries using retrieved contextual data.
- Designed the system end-to-end, covering data processing, retrieval, and user interaction.

    Web-Based Room and Resource Allocation Systems for University Campuses – University of Mumbai   May 2024
- Developed a web portal to manage room and hall bookings across multiple departments.
- Implemented a database-backed system to track availability, reservations, and usage.
- Streamlined the booking workflow, reducing manual coordination and scheduling conflicts.

TECHNICAL SKILLS
- **Programming & Scripting:** Python, C/C++, Java, SQL, Bash
- **Web & Application Development:** HTML, CSS, JavaScript, Node.js, Express
- **Security, Systems & Analysis:** Digital Forensics, Incident Response, Threat Modeling, Network Security, Malware Analysis, Vulnerability Assessment, Risk & GRC
- **Tools & Frameworks:** Wireshark, Burp Suite, Splunk, Autopsy, FTK Imager, Nmap, Playwright, MITMproxy, Streamlit, Bokeh
- **Databases & Data:** SQLite, MongoDB, PostgreSQL
- **Platforms:** Linux (Ubuntu, Kali), macOS, Windows

PUBLICATIONS
- **Gender Specificity Amid Toys, International Journal of Innovation Research in Technology (IJIRT)** Vol. 11, 2024
  [Publication Link](#)
- **Blockchain Interoperability Using Hash Time Locks,**
  Proceeding of Fifth International Conference on Microelectronics, Computing and Communication Systems: MCCS, 2021
  Secondary Contributor (review, validation, and final stage technical support)

CERTIFICATIONS
- **Cybersecurity Foundations: Governance, Risk & Compliance (GRC)**   June 2025
- **DevOps Foundation: Incident Management**   September 2025
- **Networking Foundations: Protocols & CLI Tools**   June 2025
- **Fundamentals of Azure AI Document Intelligence**   June 2025
- **Cybersecurity, Vulnerability Assessment and Digital Forensics**   June 2025