

# Mukut Chowdhury (He/Him)

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My professional objective is to utilize my programming and software engineering skills to create novel, cutting-edge solutions. I work with interdisciplinary groups to create and execute safe software programs, automate procedures to streamline operations, and improve cybersecurity protocols to protect digital resources. I am motivated to promote security, efficiency, and creativity, and will use my broad skill set to tackle challenging problems and provide significant results.

## EDUCATION

**Masters of Science, Cybersecurity** - *September 2024 - May 2026 (Expected)*

New York University, Tandon School of Engineering, Brooklyn, NY

**Bachelor of Science, Computer Engineering** - *September 2020 - May 2024*

New York University, Tandon School of Engineering, Brooklyn, NY

**Minor, Business Studies** - *September 2020 - May 2024*

New York University, College of Arts & Science, New York, NY

## SKILLS

**Programming Skills:** Java, Python/Python Flask, C++, C#, MS-SQL, Verilog, Assembly

**Software Engineering:** Object Oriented Programming, Design Pattern [with Java], Data Structure & Algorithms, Database, Computer Networking

## RELEVANT EXPERIENCE

**NYC Department of Consumer and Worker Protection, New York, NY**

**July 2023 - November 2023**

**Role: Automation Software Engineer, Quality Assurance Engineer**

- Conducted comprehensive testing and security validation of 50+ consumer protection software applications, achieving a 98% bug detection rate and ensuring compliance with cybersecurity and regulatory standards
- Collaborated with a cross-functional team including software engineers and cybersecurity teams to design and execute 20+ test cases weekly, resulting in a 15% reduction in security vulnerabilities and application errors
- Spearheaded QA efforts, meticulously tracking and managing 1000+ defects in JIRA, leading to a 20% quicker security deficit resolution; utilized Selenium in Java to automate 30+ security-focused test cases, bolstering testing precision and efficiency
- Presented technical documentation through engaging presentations to supervisors, gaining crucial feedback

**Role: Cybersecurity Engineer**

- Applied Six Sigma to enhance operational efficiency, reducing turn-around time by 50% through comprehensive support for hardware, software, and security vulnerabilities, effectively resolving technical problems
- Managed and secured website, implementing robust cybersecurity measures; monitored and tracked 10-15 daily client interactions using ServiceLink to ensure efficient and confidential handling of client data and requests
- Collaborated closely with the team to strategize automation roadmap with key software and cybersecurity insights

**RELEVANT PROJECTS**

**Eats Explorer**

**August 2023 - May 2024**

- Developed an application showcasing restaurants in Brooklyn, integrating coupon and deal features to battle food insecurity amongst college students; incorporate secure APIs and authentication mechanisms to protect user data and transaction information
- Utilized technologies such as Python Flask for backend development and React.js for frontend development to create a seamless and user-friendly experience

**Air Ticket Reservation System**

**January 2023 - May 2023**

- Engineered a dynamic and interactive web application using Flask, a Python web framework
- Managed front-end and back-end of the project with an emphasis on secure data handling
- Demonstrated proficiency in utilizing Flask's capabilities to create efficient and maintainable secure web development solutions

**Simulator**

**January 2023 - May 2023**

- Developed E20 simulator in Python, replicating E20 processor behavior for executing machine language programs
- Initialized processor state (program counter, register, memory) and conducted extensive testing with custom machine language files, ensuring reliability, error-free execution, and adherence to cybersecurity standards

**Assembler**

**January 2023 - May 2023**

- Developed a robust E20 assembler in Python, showcasing expertise in software design and implementation
- Implemented bitwise operators and bitmasks for efficient and accurate conversion of assembly code to machine code, ensuring secure and error-resistant programming

**ADDITIONAL EXPERIENCE**

**Bobby-Tariq Tutoring Center, New York, NY**

**November 2023 - Present**

**Role: General Manager, Instructor**

- Delivered an extensive curriculum to teach AP computer science concepts, emphasizing secure coding practices
- Supervised a diverse team of 3+ managers, 15+ employees, and 10+ interns, ensuring efficient daily operations
- Improved customer experience by decreasing consumer wait time by 60% over six months through the development and implementation of an original and secure online scheduling system