

Alp Berrak

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Education

Northeastern University , Boston MA Khoury College of Computer Science	September 2022 - Present
<i>Candidate for Bachelor of Science in Cybersecurity</i>	Expected: May 2026
Honors:	GPA: 3.35 /4.0 Dean's list (Spring 2023)
Relevant Courses:	Foundations of Cybersecurity Object-Oriented Design Algorithms and Data Computer Systems Discrete Structures Systems Security Networks Theory of Computation Law, Ethics, and Policy of Data Intro to Databases
Study Abroad:	Dialogue of Civilizations – Data, Technology, and Policy in the EU, Leuven, Belgium Summer 2025

Technical Knowledge

Languages:	<i>Proficient</i> in Python SQL Java JavaScript <i>Familiar</i> with Assembly C++ C JSON HTML CSS Racket Scheme
OS:	Windows Ubuntu Linux
Software:	Git MySQL Eclipse IntelliJ VSCode Docker Containers JUnit Microsoft Office Suite
Certifications:	CompTIA Security+ (Jan 10 2024 – Jan 10 2027)
Activities:	Club Taekwondo Treasurer and Vice-President

Projects

BGP-Like Router Simulator <i>Python, Socket, JSON, IP Routing</i>	10/2024
- Designed BGP-like router in Python using UDP sockets, supporting routing updates, withdrawals, and prefix aggregation. - Implemented longest prefix match and forwarding table optimization with route coalescing and policy enforcement. - Enforced provider, peer, and customer routing rules with AS path filtering and loop prevention logic.	
OpenPort <i>Python, SQL</i>	05/2025
- Co- developed REST Flask API with routes for data access across user dashboards. - Wrote optimized SQL queries and designed MySQL schema based on a custom ERD. - Developed full-stack app visualizing EU asylum data with Streamlit and machine learning models.	
Intrusion Detection System <i>Python, Scapy, Socket</i>	08/2025
- Built terminal-based IDS to monitor real-time traffic and detect SYN, UDP, and ICMP floods, and port scanning. - Implemented automated alerts, IP blocking with iptables, and attacker geolocation via the ipinfo.io API. - Logged and displayed attacks with color-coded terminal outputs for improved analyst visibility.	
Simple Socket Scanner <i>Python, Socket</i>	08/2025
- Developed lightweight Python port scanner supporting TCP connection scans across target hosts. - Implemented concurrency for faster scanning and exception handling for robust operation. - Designed terminal interface with customizable port ranges for user-driven testing.	

Experience

IT Application Business Analyst Developer Mass DOT , 10 Park Pl, Boston MA	07/2024 – 05/2025
- Documented the current Cybersecurity posture at MassDOT along with future visions - Aided in the debugging and deployment of a chatbot for the Highway division - Participated in PCI DSS audits at the RMV and AAA	
Elementary School CS Instructor Thurgood Marshall Lower Academy, Harlem NY	09/2021 – 06/2022
- Created lesson plans for several classes (Grades K-5) taught on a weekly basis. - Structured lessons to teach important coding concepts in an engaging and easily understandable way. - Presented a STEM Icon of Color before every lesson to bring attention to their achievements.	
Summer Camp STEM Instructor STEM Kids NYC	06/2021 – 08/2021 & 06/2022 – 08/2022
- Taught STEM topics with a small team every weekday to several groups of campers (Age 8 to 16). - Organized hands-on and engaging activities that made learning fun for campers.	

Interests: Cooking, Taekwondo, Collecting Comics, Motorsports, Strength Training, Ice Hockey

Languages Spoken: English, Turkish