ALEXANDER KOROBCHUK

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PROFESSIONAL EMPLOYMENT

Cybersecurity Intern — The Aerospace Corporation   *June 2020 - August 2020*
- Adapted existing network architecture to better suit cyber assessments.
- Assisted in the maintenance and development of a multi site cyber lab concept.
- Developed innovative solutions to perform cyber assessments on weapon systems.
- Clearance: Top Secret

PROJECT EXPERIENCE

Network Security Research with Neural Networks
- Researched creating custom network security datasets for machine learning tasks.
- Input raw packet data and extracted n x 1 dimensional vectors with a neural network model.
- Trained a machine learning model on these vectors to detect malicious packets on a network.

Virtual Strategic Missile Integration Complex
- Assisted with the process of virtualizing the Air Force's Strategic Missile Integration Complex.
- Developed a script that automates validation/verification of simulated weapon system circuits.
- Automatically performs comprehensive tests and returns the results in a matter of seconds.

256-Bit AES Encryption
- Developed a program that could perform 256-bit AES encryption.
- Written in Python without the use of any libraries.
- Observed the avalanche effect when changing one bit from the input.

National Cybersecurity Center & Stephenson Stellar Corporation
- Worked on the development process of a cyber lab.
- Created walk-through documentation for various cybersecurity exercises, such as SQL injection.
- Would allow students to observe the basic attacks performed on various servers.

EDUCATION

University of Colorado Colorado Springs   *August 2017 - Present*
Major: Computer Security   GPA: 3.397

Pikes Peak Community College   *August 2015 - May 2016*
Received an Associate of General Studies

Coursework: Computer Networks, Computer Architecture, System Administration & Security,
Applied Cryptography, Computer Information Systems, Network Penetration Testing

TECHNICAL SKILLS

Network Security:	Metasploit, Burp Suite, Nmap, Dirbuster
Languages:	C#, C++, C, Python, Java, Assembly, HTML
Data Science:	Machine learning, neural networks
Design:	Multiple semesters of teamwork with real clients on design and development

ACHIEVEMENTS

Dean's List (2018): Achieve a GPA of 3.0 or above with 12 or more credit hours.
Colorado Cybersecurity Scholarship (2019): For students in the cybersecurity program at UCCS.
President's List (2020): Achieve a GPA of 3.5 or above with 12 or more credit hours.