

Drew E. Brown

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EDUCATION

December 2023

Old Dominion University

Master of Science in Cybersecurity

- Graduate Master Project: *DEMONSTRATING CYBERSECURITY IN PRACTICE VLAN Implementation for NIST Cybersecurity Framework Education*, Local Area Network Test bed seeking to enable academic user access for equitable computing resource access
- Relevant coursework: Leadership and Management in Cybersecurity, Advanced Ethical Hacking, Advanced Cyber Law and Policy, Principals and Practices of Cyber Defense
- **Scholarship:** National Science Foundation Scholarship for Service “*Old Dominion University Cyber LeADERS Scholars Program*” - Full funding.

December 2021

Bachelor of Science in Mechanical Engineering Technology

- Minor in Cybersecurity
- Senior Design Project: *Implementation of IoT Devices for Process Stream Analysis and Operations Optimization*, Busch Vacuum Systems & Old Dominion University Research Initiative
 - o Researched and implemented Internet of Things sensor network by direction of corporate managers.
 - o Researched security framework resulting from vendor solution recommendations & implementations.
 - o Highlighted single point of failure existing for raw data metrics transmitted and maintained outside corporate controlled domain environment.
 - o Educated steps to introduce Zero-Trust Security Model and Cyber Risk Mitigation Efforts.
- Relevant coursework: Enterprise Cyber Defense
- **Scholarships:** National Science Foundation S-STEM project “*Pathway to Completion for Pursuing Engineering and Engineering Technology Degrees*” - received multiple scholarship fundings for high performing veteran students at ODU

WORK EXPERIENCE

2023/01 – Present

Cybersecurity Infrastructure and Security Agency (DHS)

40hr/wk

Cybersecurity Pathways Intern – Emergency Communications IT Management (GS-07)

- Support Division mission introducing use cases of emerging technologies – AWS
- Provide proof of concept presentations to assist unit efforts for Next-generation Emergency Communications implementations.
- Report to senior administrative staff on recent high-profile vulnerabilities and outline their attack vectors leading to IT system exploitations.
- Assist with Agency Policy writing to aid in Cyber workforce development.

2022/01 – 2023/05

Virginia Modeling Analysis and Simulation Center

20hr/wk

Graduate Research Assistant

- Mentored 6 High School students in Cyberpatriot program – Mentored 2 undergraduate Mentors.
- Research education models implementing AWS resources to engage student experiential learning.
- Researching AWS infrastructure security models for GIS data using QGIS.
- Cleaning 1000+ GIS data points enabling agency data analyses.
- Completed AWS Certified Cloud Security Practitioner course.

2018/08 – 2021/12

Old Dominion University Research Foundation

20hr/wk

Undergraduate Researcher

“Computer Science Principles and Cybersecurity Pathway for Career and Technical Education”, a project funded by the U.S. Department of Education - Perkins Innovation Project Old Dominion University and Norfolk Public Schools - PI. Dr. Vukica Jovanović

- Mentored 6 junior High School students for Cyberpatriot Competition and Research Activities.
- Developed 6 cybersecurity educational modules for Norfolk City Public Schools for Career and Technical Education high school teachers and students.
- Developed 4 educational modules for NJROTC cybersecurity pathway and for CTE teachers and their high school students.

“Creating the Fleet Maker”, a project funded by the Office of Naval Research

PI Dr. Anthony W. Dean

- Undergraduate teaching assistant in additive manufacturing workshops, multiple workshops with 20 active-duty Naval personnel to introduce 3D printing technologies and techniques.
- Responsible for the maintenance and upkeep of seven additive manufacturing machines and reverse engineering equipment in Kaufman Hall 116, Batten College of Engineering and Technology.

2008/09 – 2014/09

United States Navy, Hospital Corpsman

Senior Line Corpsman, Fleet Marine Force, 1st Marine Division, 3/5 Kilo Company

CLEARANCES

2023 – Present

Security Clearance: Secret (Renewed)

2007 – 2017

Security Clearance: Secret (Initial Application)

SKILLS, INTERESTS, AND AFFILIATIONS

Programming and Tooling:	Bash, Python, Infrastructure as Code (Vagrant, Ansible), Office Software Suites, Autodesk (AutoCAD, Inventor, Fusion 360), GitHub, Security Technical Implementation Guide (SCAP)
Operating Systems:	Windows, Linux, MacOS, VirtualBox, VMWare
Personal:	Attention to detail, concentrated problem solving, research, teamwork, and prioritization skills
Technical:	Physical and virtual networking with pfSense firewall software, Cloud architecture proficiency
Interests:	Cybersecurity, Systems Engineering, U.S. infrastructure rehabilitation, infrastructure optimizations, and social education
Professional Affiliations:	Institute of Electrical and Electronics Engineers, Member # 97100070 American Society for Engineering Education, Member # 130291

PAPERS

Jovanović, V., Crespo, M., Marshall, D., Popescu, O., **Brown, D.**, Kuzlu, M., Katsioloudis, P. Vahala, L. (2021). “A Look into Increasing the Number of Veterans and Former Government Employees Converting to Career and Technical Cybersecurity Teachers”, 2021 Annual Conference and Exposition, American Society of Engineering Education, Virtual, July 2021 (paper accepted).