DOMINICK ALEXANDER VASKE

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EDUCATION

Columbia University in the City of New York   New York City, NY
Master of Science in Computer Science, GPA: 4.03/4.0   May 2024 – Dec 2026 (Anticipated Degree Conferral)
- Relevant Coursework: Artificial Intelligence, Algorithms, Data Structures and Algorithms (Java), Advanced Programming in C

University of Pennsylvania   Philadelphia, PA
Bachelor of Science in Systems Engineering with Mathematics Minor, GPA: 3.51/4.0, Cum Laude   Aug 2014 - May 2018
- Relevant Coursework: Computer Systems, Embedded Systems / Microcontrollers Lab, Signal Processing, Control System Exposure

PROFESSIONAL EXPERIENCE

United States Merchant Marine Academy   Kings Point, NY
Instructor of Naval Science and Security Manager   Jul 2023 - Present
- Advocated to cross-functional committees, providing strategic insights to senior leadership and mentoring student body
- Applied data-drive decision-making in orchestrating security clearance program for 1000 midshipmen, ensuring compliance with stringent security protocols
- Enhance and implement curriculum for freshmen midshipmen providing foundational knowledge on Naval Science

United States Navy, Submarine Officer   Norfolk, VA
Officer of the Deck / Ship's Duty Officer / Engineering Officer of the Watch / Assistant Weapons Officer   May 2020 - Jun 2023
- Performed rotating shift work at sea / 100 hours per week in port
- Oversaw safe operations for 120 crew and coordinated 100+ critical maintenance actions sustaining $1B submarine
- Supervised reactor operations leveraging real-time embedded control systems for propulsion and power generation, ensuring safe operation of high-voltage equipment and applying real-time monitoring of 100+ sensors, anomaly detection, and control system optimization.
- Supervised Weapons Department (50 personnel) maintaining critical embedded-systems for sonar, torpedo, and fire control divisions

PROJECTS

Custom HTTP Web Server
- Built HTTP/1.0 web server in C to serve static HTML pages and database entries via TCP socket communication on Unix-based system to handle multiple concurrent connections
- Integrated RESTful API-style database lookup service to serve MDB records based on user query
- Implemented file permission enforcement (644/711) and directory traversal protection to mitigate unauthorized access

Song Genre Classification
- Built supervised learning pipeline using PCA for dimensionality reduction and k-Nearest Neighbors for classification, achieving 90% accuracy on a labeled test set with input data of 500 songs across 5 genres
- Preprocessed song feature vectors, tuned model hyperparameters, and visualized principal components to understand genre clustering with data science libraries (NumPy, Pandas, Matplotlib)

SKILLS

Programming: Java, Python, JavaScript, C, HTML/CSS, Bash/PowerShell (scripting/automation) Familiar with web frameworks (Flask/Node.js)
Software Development: RESTful APIs, Flask, FastAPI, OOP, Full Stack, Unit Testing, Familiar with Agile/Scrum development methodologies, Documentation and Debugging/Troubleshooting
Systems: TCP/IP, HTTP Servers, Linux/Unix Environments, Systems Programming, Databases (SQL/NoSQL), Web Services
Data Science & ML: PCA, k-NN, Machine Learning, Data Preprocessing, Model Evaluation, Familiar with Matlab/Simulink
Leadership & Systems Engineering: Led teams in operationally intensive environments; PNEO Qualified Nuclear Engineer

NAVAL TRAININGS, CERTIFICATIONS, AND AWARDS

PNEO Qualified (Prospective Nuclear Engineer Officer), June 2022, completed Naval Reactors' rigorous qualification process, certifying me to serve as a department head aboard any U.S. Navy nuclear reactor plant.
Top Secret Level Clearance, March 2025 renewal, Awarded Top Secret - Sensitive Compartmented Information (SCI) level clearance for performing missions related to national security aboard nuclear submarines
Two Navy Achievement Medals, 2021 and 2023, Celebrated for superior team-managing during deployment as Engineering Officer of the Watch, for supervising critical engineering operations, for resolving conflicts as the deployment primary Contact Manager during missions, and for demonstrating exceptional leadership in high-pressure operational environments