Harry Cohen-Dumani

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EDUCATION

B.S. in Computer Engineering — College Park, MD
University of Maryland, Minor in Robotics and Autonomous Systems — GPA: 3.35/4.00, May 2027

EXPERIENCE

Controls Engineering Intern — Tysons, VA
M.C. Dean – Automation Systems — June 2026 – Aug 2026

- Collaborated with engineers on electrical and control schematics, cable schedules, I/O points lists, and network architectures for control systems, supporting data center building automation systems including BMS and EPMS.
- Authored and refined detailed test procedures for modular control skids, ensuring consistent commissioning, functionality verification, and seamless deployment into data center environments.
- Tested and integrated PLC-based control systems for modular data-center skids, confirming proper equipment sequencing, safety interlocks, and monitoring capabilities.

Corporate IT Intern — McLean, VA
Onelife Fitness — May 2025 – Aug 2025

- Led a company-wide upgrade from Windows 10 to Windows 11 by planning, scheduling, imaging, installing, and delivering post-deployment support across all club locations while ensuring minimal disruption to operations.
- Traveled to multiple Onelife Fitness club locations and supported corporate staff remotely by diagnosing and resolving hardware, software, and network connectivity issues, escalating complex problems as needed.

STEM Camp Counselor and After-School Teacher — Washington, DC
Vineyard App Camp — May 2022 – Aug 2024

- Taught Python game design and web development to children aged 5-15, developing engaging robotics and coding curricula for schools and summer camps.

ENGINEERING PROJECTS

Vision-Guided UR3e Block-Stacking Robot — College Park, MD
ENME480 – Introduction to Robotics — Aug 2025 – Dec 2025

- Built a ROS2-based vision-guided UR3e pick-and-place system using ArUco markers and OpenCV for block detection, localization, and automated block sorting and stacking.
- Implemented a camera-to-table perspective transform and custom FK/IK to generate accurate joint trajectories and deployed the full pipeline on the physical UR3e arm to precisely manipulate and stack blocks on a table.

Smart Window Shade System — College Park, MD
Personal Project — Nov 2025 – Dec 2025

- Designed and built an automated curtain system to mechanically spool a curtain onto an axle above the curtain rod.
- Developed Python control software for Raspberry Pi to enable precise motor positioning, automated operation, and iOS Shortcuts integration for scheduled routines and general home automation.

Autonomous Payload Data-Extraction Robot — College Park, MD
ENES100 – Introduction to Engineering Design — Jan 2024 – May 2024

- Designed and built an autonomous robot to navigate a randomized obstacle arena using overhead vision-based localization and onboard sensing, meeting strict product specifications while extracting and classifying a magnetic/non-magnetic puck.
- Developed hardware and software to approach a pylon payload, contact a metal pad, measure a randomized square-wave duty cycle, wirelessly transmit mission-critical data, and reach the destination zone within mission requirements.

LEADERSHIP

Vice President of Finance — College Park, MD
Beta Theta Pi, University of Maryland — Oct 2024 – Nov 2025

- Managed all financial operations for a fraternity of 110 members, overseeing budgeting, cash flow, and financial reporting.
- Advised the executive board on financial strategies contributing to the fraternity's overall health.

Programming Team Lead — Bethesda, MD
High School Robotics (FRC) — Sep 2019 – Apr 2023

- Led student teams in FIRST Robotics Competition to design and build competition-ready robots within strict specifications and limited resources, coordinating subsystem integration and testing under tight deadlines.
- Developed control systems and piloted competitive robots during tournament matches, highlighting programming expertise.

SKILLS

Java | Python | C/C++ | MATLAB | ROS 2 | x86-64 Assembly | Verilog | Unix | JavaScript | Fusion 360 | AutoCAD |
Circuit Analysis | Signal Analysis | Robot Kinematics & Dynamics | Word, Excel, PowerPoint | Git | Computer Networking