

# ARNAV DEOL

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## EDUCATION

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### Michigan State University College of Engineering

East Lansing, MI

Major: Computer Science | GPA: 4.00 | Dean's List

May 2025

## WORK EXPERIENCE

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### General Dynamics Mission Systems

Pittsfield, MA

Software Engineering Intern

May 2023 — August 2023

- Integrated a multitude of state-of-the-art experimental systems aboard the Navy's USS Independence class Littoral Combat Ship.
- Used C++, C#, and Assembly to build efficient error-checking firmware, reducing testing times and facilitating effective DevOps.
- Obtained a security clearance with the U.S. Department of Defense to add value to projects of high importance to our national security.

### Michigan State University

East Lansing, MI

Undergraduate Learning Assistant

Dec. 2022 – Present

- Taught two classes of 30 students each a variety of python programming techniques including functions, lists, and data types.
- Proctored exams, led helproom discussions, and ensured every student was supported throughout their CSE 102 learning experience.

### Spectrum Consulting Group

East Lansing, MI

Business Analyst

Jan. 2023 - Present

- Collaborated with a team of 5 to research upcoming digital marketing trends, building the company's intellectual capital. See it [here](#).
- Identified KPI's for a local business in the Lansing area that saw a 50% increase in sales after thorough data analysis using python.
- Led a 10-week long engagement through the entire client acquisition process, negotiating a paid engagement with a prominent quantum computing startup based out of Chicago. Ultimately networked with 100+ businesses and assisted in organizing 3 engagements.

### NASA

Virtual

TSGC/SEES Peer Mentor

May 2021 – Present

- Managed a team of 8 student-researchers in a project to utilize four convolutional neural networks (AlexNet, LeNet, VGG-16, and ResNet) to research their applicability to the classification of mosquito species. See the team's publication [here](#).
- Used crowd-sourced data, the ArcGIS platform, and data from various NASA GLOBE satellites to research Mosquito preference for artificial or natural shade leading to a publication in the American Geophysical Union. See the abstract in Harvard's journal, [here](#).
- Taught basic, intermediate, and advanced levels of python to 120 students alongside effective data management practices.

### qBraid

Virtual

Software Development and Business Intern

March 2022 – May 2023

- Converted dozens of chapters of educational content into both python and Q to further the accessibility of quantum computing educational material in a relatively narrow computer science field.
- Analyzed hundreds of gigabytes of student data with enterprise-grade data analysis tools to develop better teaching strategies, increasing engagement, interest, and customer retention.
- Segmented the company's marketing audience based on key engagement indicators and utilized this data to optimize company-wide marketing strategies to further personalize automatic email and social media communication. Led to 40% less marketing expenditure
- Led sales and marketing efforts towards universities with active quantum research programs resulting in an increase in customers.

### Standards Testing Laboratories

Massillon, OH

Engineering and Business Intern

June 2021 – July 2021

- Built and programmed Allen-Bradley industrial Programmable Logic Controllers in C and C++ in order to fulfill the delivery of a 4-position tire testing machine to Bridgestone South Africa by December of 2021. Built in automation to decrease company costs.

## PROJECTS

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### FRC 8728: Argonauts

Troy, MI

President and Founder

March 2021 – June 2022

- Established a new robotics team at Troy Athens High School with the support of external stakeholders and school administration, broadening the accessibility of low-cost, high school STEAM opportunities in the Metro Detroit area.
- Organized 20+ volunteering events focused on DEI and community outreach for team members to boost their experiences with STEAM and ensured that the organization was maintaining a positive social footprint on the Metro Detroit.

## ADDITIONAL SKILLS

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- \* Proficient in Git, Agile, Python, Q, Java, C++, C, R, Assembly, JavaScript, HTML, React, Node.js, OCaml.
- \* Have taken Statistics for Engineers (STT 351), Data Structures and Algorithms (CSE 331), Calculus II + III (MTH 133, 234)