LUKE NELSON

419 Hamilton Pl, Ann Arbor, MI 48104

(734) 892-6993, lukenels@umich.edu

SKILLS AND ASSETS

Proficiency in Programming Languages: C++, Python, HTML5/CSS3/JavaScript, Node JS, MATLAB

Software: Git/GitHub, Visual Studio Code, Node Project Manager (npm), MongoDB, MySQL, PostgreSQL, React

Skills:

- **Skilled in using Python for implementing machine learning, neural networks. Additionally, possessing a strong foundation in data preprocessing, model development, and optimization of ML model performance.**
- **Experienced in Python libraries for Machine Learning and Data Manipulation / Visualization (i.e. PyTorch, Scikit-learn, Matplotlib, Seaborn, Pandas).**
- **Strong proficiency in front-end development, expertise in React/Next.js frameworks, creating dynamic web apps with JS.**

COLLABORATIVE PROJECT EXPERIENCE

SPARK Electric Racing **Ann Arbor, MI**

Software Engineer *August 2023 - Present*

- Filler
- Filler

Aerodynamics Engineer *November 2022 - July 2023*

- Working in a team of engineering students to design, simulate, and manufacture a high downforce aero package for a motorcycle using tools such as computational fluid dynamics, resulting in increased traction and higher cornering speeds.

ENGR 100.400 (Self Driving Cars, Drones, & Beyond - Autonomous Electric Systems) **Ann Arbor, MI**

Programmer *August 2022 - December 2022*

- Worked with a team to simulate and test an autonomous solution using Python and a drone simulation powered by Unreal Editor. Mission statement was for a quadcopter to map cavernous, underground environments, and be capable of autonomously adjusting to external factors in its environment.

INDIVIDUAL PROJECTS / PORTFOLIO

1
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2
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3
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EDUCATION

University of Michigan College of Engineering **Ann Arbor, MI**

Bachelor of Engineering in Computer Science, Minor in Statistics *Expected Graduation: May 2025*

GPA: 4.00/4.00

Course Highlights: Programming and Introductory Data Structures (C++)(EECS 280) • Introduction to Matlab and C++ • Introduction to Autonomous Electric Systems • Multivariable and Vector Calculus • Introduction to Differential Equations • Discrete Mathematics (EECS 203)

Salem High School **Canton, MI**

GPA: 4.28/4.00 • National Merit Finalist • International Baccalaureate Diploma • National Honor Society *June 2022*

LEADERSHIP EXPERIENCE

Eagle Scout, Troop 1537 **Plymouth, MI**

Senior Patrol Leader 1 term, Assistant Senior Patrol Leader 3 terms, Earned Eagle Scout Award *June 2020 - May 2022*

- Organized and led a troop of ~75 boy scouts as the highest position of scout leadership for 6 months, and performed associate leader role for 18 months.
- Earned Eagle Scout Award in May of 2021 for constructing an animal shelter.

ACTIVITIES / OTHER NOTABLE ITEMS

SPARK Electric Racing	*Nov 2022 – Present*
{quant club}	*Aug 2023 - Present*
Eagle Scout, Troop 1537	*Feb 2016 – November 2021*
Michigan Running Club	*Sept 2022 – Present*