Hektor Buqaj

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EDUCATION

UNIVERSITY OF MICHIGAN
Bachelor of Data Science in Engineering *May 2027*

- **GPA, Honors/Awards:** 3.51 | University Honors (Winter 2024), Dean's List (Winter 2024)

PROJECTS

University of Michigan **Ann Arbor, MI**
Engr 100: Toys and Microprocessors *January – May 2024*

- Collaborated with a team of students to design and build the software for an educational calculator-like toy prototype.
- Engineered the visual interface through a custom-built library of functions utilizing the "E100" processor framework.
- Enhanced project management by integrating and executing front and back-end components effectively.
- Successfully delivered and presented a fully playable prototype toy for students to playtest at a fair.

University of Michigan **Ann Arbor, MI**
Business + Tech Winter 2024 Datathon *February – March 2024*

- Partnered with a diverse team to develop a business model to address industry-responsible greenhouse gas emissions.
- Planned and finalized a product by leveraging teamwork and communication with diverse academic backgrounds.
- Gained practical experience in interpreting large datasets using Python with Matplotlib, NumPy, and Pandas.
- Strengthened problem-solving abilities by tackling real-world environmental issues in a competitive setting.

University of Michigan **Ann Arbor, MI**
EECS 280: Euchre Game *March 2024*

- Developed skills in Abstract Data Types in C++, Derived Classes, Inheritance, and Polymorphism.
- Designed custom "simple" (AI player) and human player classes in addition to card and pack ADTs with inheritance.
- Created basic player AI following game rules and make Euchre a possible single-player experience.

University of Michigan **Ann Arbor, MI**
EECS 281: Pokémon *November – December 2024*

- Implemented MST algorithms, analyzing efficiency of Prim's and Kruskal's for different scenarios.
- Designed and optimized a Branch and Bound algorithm for the Traveling Salesman Problem (TSP).
- Developed heuristics and bounding methods to achieve near-optimal solutions efficiently.
- Researched TSP heuristics and used graph visualization tools for debugging and analysis.

SKILLS

- Advanced C++ proficiency: Classes, Data Structures, Dynamic Resource Management, Derived Types, Linked lists.
- Intermediary Python proficiency: Matplotlib, NumPy, Pandas, Feature Engineering, EDA, minor ML testing.
- Intermediary Assembly proficiency: Hardware interface, Direct Memory Access, Stack Management.

LEADERSHIP EXPERIENCE

University of Michigan **Ann Arbor, MI**
Traditional Residential Advisor *August 2024 – December 2024*

- Cultivated strong interpersonal skills by building and maintaining positive relationships with over 100 diverse residents, ensuring an inclusive and supportive community environment.
- Demonstrated effective conflict resolution abilities by mediating disputes among residents, facilitating communication, and developing mutually agreeable solutions to enhance communal living.
- Developed exceptional time management and organizational skills by balancing the demands of an academic schedule with the responsibilities of on-call duties, administrative tasks, and emergency response
- Improved crisis management and problem-solving capabilities by swiftly addressing emergency situations, providing immediate support and resources, and communication effectively with campus safety and administration.