Rishabh Chandel

+1 (248) 909-8046 | rchandel@umich.edu | rchandel2004@gmail.com
www.linkedin.com/in/rishabh-chandel-482aa5249 | 510 Lawrence St, Ann Arbor, MI 48104

EDUCATION:

University of Michigan Ann Arbor **[September 2022 - May 2025]**

Undergraduate Computer Science Major, Statistics Minor, GPA: 3.825/4.00

SKILLS:

- **Programming Proficiency / Soft Skills:**
  - Programming languages: C++, Java, Python, R, Verilog
  - Other: Linux, OpenCV, PyTorch, TensorFlow, and Unity

RELEVANT COURSES:

- **Current courses:** **[September 2024 - December 2024]**

Introduction to Operating Systems (EECS 482), Introduction to Machine Learning (EECS 445)

- **Past courses:** **[August 2022 - April 2024]**

Foundations of Computer Science (EECS 376), Introduction to Computer Security (EECS 388), Introduction to Statistical Computing (STATS 306), Introduction to Computer Organization (EECS 370), Introduction to Logic Design (EECS 270), Data Structures and Algorithms (EECS 281), Programming and Data Structures (EECS 280), Discrete Math (EECS 203)

RESEARCH EXPERIENCE:

- **Research Programmer in University of Michigan Direct Brain Interface (UMDBI) Lab [May 2024 - Current]**
  - Developed a brain-computer interface (BCI) for hands-free typing using visual stimuli to elicit and interpret electroencephalogram (EEG) signals
  - Implemented efficient custom stimulus creation and presentation algorithms to facilitate a fast, consistent online system
  - Abstracted code to provide an interface for future implementation of new stimulus creation and presentation algorithms
  - Utilized the BCI2000 C++ codebase and Qt for the implementation and presentation of stimuli
- **Undergraduate Research on Choice-Making Project in the UMDBI Lab [October 2022 - April 2024]**
  - Implemented in C++ a brain computer interface to facilitate communication with users who have motor disabilities and low attention spans using BCI 2000 codebase
  - Facilitated preliminary pilot testing on produced BCI to identify potential improvements in accuracy and speed of choice-making
- **AI Developer in Collaborative Lab For Advancing Work in Space (CLAWS) [September 2023 - current]**
  - Trained Haar Cascade classifier with OpenCV to detect tennis balls and send bounding-box info using WebSocket and Ngrok

PROGRAMMING PROJECTS:

- **Fantasy Football Rookie Efficiency Regression [Python, PyTorch] [December 2023 - current]**
  - Utilized PyTorch building blocks to make a non-linear regression model to extrapolate rookie career statistics given their performance in the combine, their draft pick, and their college statistics
- **Writing-to-Text Conversion for Math Symbols [Python, PyTorch] [December 2023 - January 2024]**
  - Implemented pipeline to extract contours from an image of handwriting, classify extracted symbols with a convolutional neural network (CNN), and draw the classified symbols on the output image in any font
  - Built a TinyVGG CNN in PyTorch, trained and tested it with a custom dataset of 82 different symbol classes