Atiksh Bhardwaj

ab2635@cornell.edu ● atikshb.github.io

Education

Cornell University, College of Engineering Ithaca, NY
Bachelor of Science in Computer Science, Minor in Mathematics Expected December 2025
GPA: 4.00/4.00
Honors and Awards: Dean's Honors List and On Track for Honors Program
Related Courses: Algorithms, Reinforcement Learning, Machine Learning, Computer Vision, Artificial Intelligence, Functional Programming, Systems and Organization, Probability and Statistics, Discrete Math, Computational Algebra, Honors Data Structures, Linear Algebra, Multivariate Calculus, Abstract Algebra

Technical Skills

- **Back-end Development Tools:** Python, Java, OCaml, MATLAB, Simulink, ROS C, C++, SQL
- **Front-end Development Tools:** Electron, HTML5, CSS3 & JavaScript
- **Developer Tools:** Git, GitHub, VS Code, PyTorch, TensorFlow, OpenCV
- **Cloud Development Tools:** AWS, Azure, Google Cloud,
- **Computer:** Linux, Windows, MacOS Microsoft Suite (Excel, Word, & PowerPoint), Blender, Google Suite

Experience

Research Experience May 2023-Present

- Research as a Full-Time Undergraduate Researcher for PoRTaL Group under Prof. Sanjiban Choudhury during School Year and Summer 2023 and Summer 2024

MOSAIC: A Modular System for Assistive and Interactive Cooking CoRL 2024

- Engineered vision-based system for human pose tracking to run previous forecasting algorithms
- Coded in Python and ROS to automate different robot tasks such as handover and stirring that activated from prompts generated by the LLM task planner
- Best Paper at ICRA 2024 VLNMN Workshop and Best Poster at ICRA 2024 MoMa Workshop

InteRACT: Transformer Models for Human Intent Prediction Condition on Robot Action ICRA 2024

- Engineered a ROS framework to map human movement to Franka Robot for Human-Robot data collection
- Coded Alignment loss for training transformer architecture to compare human motion versus robot motion
- Created and Maintained Collaborative Manipulation Dataset (CoMaD) with over 488 human-human episodes and 304 human-robot episodes resulting in a total of 7 hours of motion

ManiCast: Collaborative Manipulation with Cost-Aware Human Forecasting CoRL 2023

- Created new human-human data for training, created figures and edited final paper

Work Experience

Teaching Assistant August 2023-Present

- Hold weekly office hours, Create new assignments for each course, Grade exams and assignments
- Reinforcement Learning (Spring 2025), Robot Learning (Fall 2024), Artificial Intelligence (Spring 2024), Functional Programming (Fall 2023)

Brains4Drones Internship May 2022-August 2022

- Programmed computer vision algorithm to identify specific danger zones amongst wildfire prone areas
- Created automatic panorama stitcher to make LIDAR maps through OpenCV and C++ based on drone movement
- Coded GUI application in JavaScript for line workers to view footage and automated Lidar Map in real-time

Projects

DINK: Differently Initialized Q-Networks January 2024-May 2024

- Collaborated with team of 2 for final project of CS4756: Introduction to Robot Learning
- Coded a Deep Q-Network in Python from a public Atari dataset on open-source Space Invaders environment

CritterWorld August 2022–December 2022

- Collaborated with team of 3 for final project of CS2112: Honors Data Structures to make a high fidelity simulator
- Coded in Java, a new critter programming language, a backend simulation engine, and a GUI for the simulation

BigRed//Hacks November 2022

- Collaborated with team of 4 to create NFTTree as an open marketplace for users to grow trees via NFTs
- Developed a JavaScript GUI as a prototype mock of the social media gallery of the NFT trees
- Winner of Blockchain and Web Track sponsored by PI Network