Abraham Leininger

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EDUCATION

Indiana University, Bloomington – *Bachelor of Science in Computer Science.* **Graduation:** May 2024
Major: Computer Science. **Minors:** Mathematics, Statistics. **Cumulative GPA:** 3.9/4.0
Awards: CSCI Student Scholarship, Hutton Honor College Member, Deans List.
Relevant Coursework: Data Structures, Algorithms, Object Oriented Programming (OPP), Linear Algebra.

WORK EXPERIENCE

Vehicle Autonomy and Intelligence Lab (VAIL) – *Undergraduate Researcher*
May 2022 – Present. Bloomington, IN

- Implemented algorithms for planning and controlling autonomous robots using ROS in the Gazebo simulator.
- Weekly collaborative meetings with PhD mentor to continue to develop skills in the field of robotics.

Indiana University – *Undergraduate Instructor for Introduction to Computer Science (CSCI-C211)*
August 2022 – Present Bloomington, IN

- Led weekly lab sections of 30 students and taught foundational computer science concepts in the Racket programming language like recursion, binary search, and sorting.
- Hosted one-on-one office hours to assist student in learning concepts in computer science.

French Lick Resort – *Digital Marketing Intern*
May 2021 – August 2021 French Lick, IN

- Organized the creation and deployment of monthly promotional Eblasts/newsletters using HTML and CSS in collaboration with graphic designers and members of the marketing team.
- Managed routine updates to the activities and events pages on frenchlick.com using HTML and CSS in coordination with the hotel and golf course event managers.

PROJECTS

Human Benchmark Clone (React.js, TailwindCSS)
August 2022 – Present

- Implemented the user interface and games from the website humanbenchmark.com utilizing React.js and TailwindCSS.
- Currently adding additional back-end features like a database, authentication, and a leaderboard.

Probabilistic Roadmap Planning Algorithm (ROS, Python, C++, Turtlebot3, Gazebo, Rviz, Linux)
July 2022 – August 2022

- Implemented the Probabilistic Roadmap algorithms by using ROS and Python to plan a path from point a to point b in a closed environment using a random sampling of points.
- Programmed a controller using differential drive and Python to have simulate the Turtlebot3 robot follow path created from the algorithm in the Gazebo simulator.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, C/C++, Java, Racket, R.
Software: Git, ROS, Linux, Vim, IntelliJ, VSCode, LaTeX.
Activities/Interests: Chess Club, Guitar, Piano, Skiing.