Anna Vadella

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TECHNICAL SKILLSs

- **Languages:** C++, Java, Python, SQL
- **Frameworks and Libraries:** ROS, OpenCV, Pandas, Matplotlib
- **Development Methodologies:** Agile (SCRUM)

NOTABLE ACHIEVEMENTS

- Awarded Academic Excellence in CSSE Award in Spring 2024 for outstanding performance in CSSE courses
- Collaborated on autonomous vehicle research, developing and analyzing algorithms for adaptive speed and lane-following using ROS and OpenCV, simulated intersection testing
- Applied Python programming and data analysis skills to explore solutions for mitigating bias in college admissions
- Elected Vice President of Butler University's Association for Computing Machinery Chapter
- Reviewed and provided feedback on K-8 computer science textbooks for Ellipsis Education, ensuring age-appropriate content while maintaining accuracy and educational quality
- Chosen to deliver the introductory speech for Dr. Eugene Spafford at the 2024-2025 James J. Wood Lecture Series, showcasing strong public speaking skills

EDUCATION

Bachelor of Science in Computer Science Expected Graduation: May 2025

Butler University | Indianapolis, Indiana

Minor: Anthropology

GPA: 3.77/4.00

Awards and Honors: Dean's List Spring 2023, Spring 2024

RESEARCH EXPERIENCE

NSF Research Intern | *Lawrence Technological University* May 2024 - July 2024

- Collaborated with seven undergraduate students to research the development, testing, analysis, and implementation of self-driving and V2X algorithms for automated vehicles
- Developed an adaptive speed algorithm and robust lane-following algorithms to improve driving safety and efficiency for autonomous driving using ROS and OpenCV
- Tested algorithms in a simulated intersection environment and utilized ROSBoard for visualization of ROS topics and traffic light states

Research Assistant for Dr. Kelly Van Busum | *Butler University* January 2024 - April 2024

- Focused on data analysis to investigate potential solutions for mitigating bias in the college admission process
- Applied Python programming skills to develop and test solutions aimed at reducing bias
- Refined analytic skills and developed a solid foundation for applying computational techniques to real-world challenges

RELEVANT EXPERIENCE

Information Technology Intern | *Butler University* August 2024 - Present

- Used Python to analyze SQL query data on student engagement and presented the results through Excel spreadsheets and visual graphs
- Gained experience programming IoT projects with Raspberry Pis and Arduino

Teacher's Assistant for CS351 | *Butler University* August 2024 - Present

- Assist professor by holding exam review sessions, grading assignments and exams, and teaching lessons
- Provide one-on-one support to students during office hours, helping them with homework, coding assignments, and studying for exams

CSSE Departmental Tutor | Butler University August 2023 - Present

- Tutor students in algorithm design and analysis, as well as assistance in C++ and Java programming languages
- Offer support with homework and test preparation to enhance student performance

Information Commons Assistant | *Butler University* August 2022 - Present

- Provide customer service to library patrons by assisting with daily library operations, managing checkouts, shelving and locating books, printing, and copying

Secretary → Vice President for ACM Club | *Butler University* August 2022 - Present

- Organize club meetings and activities to enhance member engagement and computer literacy on campus
- Increased student membership by 50% by organizing regular club meetings, planning engaging events, and collaborating with other campus clubs to expand our reach

CSSE Peer Mentor | *Butler University* August 2022 - Present

- Provide academic support and guidance serving as a peer mentor, offering resources and one-on-one assistance to improve undergraduate computer science students' academic performance and experience

Team Lead (SCRUM Master) | *Butler University* Spring 2023, Spring 2024

- Facilitated overall project organization and management using agile methodologies, promoting collaboration and transparency across all sprint cycles
- Led sprint planning, daily-stand ups, and retrospective meetings, ensuring teams remained focused on achieving project goal

PUBLICATIONS

M. Evans, M. Machado, R. Johnson, L. Escamilla, **A. Vadella**, B. Froemming-Aldanondo, T. Rastoskueva, M. Jostes, D. Butani, R. Kaddis, C. Chung, and J. Siegel. 2024. Vehicle-to-Everything (V2X) Communication: A Roadside Unit for Adaptive Intersection Control of Autonomous Electric Vehicles *[Under Review]*

B. Froemming-Aldanondo, T. Rastoskueva, M. Evans, M. Machado, **A. Vadella**, L. Escamilla, R. Johnson, M. Jostes, D. Butani, R. Kaddis, C. Chung, and J. Siegel. 2024. Developing, Analyzing, and Evaluating Self-Drive Algorithms Using Drive-by-Wire Autonomous Vehicles *[Under Review]*