# Brett Schumacher

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## EDUCATION

**Bachelor of Science in Computer Science, Astrophysics Minor**                Expected May 2023
***College of Science and Engineering***, *University of Minnesota-Twin Cities Minneapolis, MN*
GPA: 4.0 – University Honors Program
*Relevant Completed Coursework:* Alg. & Data Structures, Adv Programming Principles, Discrete Structures of Computer Science, Math Methods for Physicists
*Fall 2021 Coursework:* Machine Architecture & Organizations, Animation & Planning in Games, Applied Linear Algebra, Analytical Mechanics
*Spring 2022 Coursework:* Program Design & Development, Fundamentals of Computer Graphics I

## RESEARCH EXPERIENCE

**UROP (Undergraduate Research Opportunity Program), UMN**                Summer 2021
Under guidance of Professor Evan Suma Rosenberg

- Developed a dynamic framework for the creation of Virtual Reality environments, allowing them to rescale automatically to fit a user's physical space.
- Utilized Unity Engine to develop the framework
- Submitted a poster showcasing framework to the UMN Digital Conservatory
    - https://conservancy.umn.edu/handle/11299/223271

**Research Assistant, UMN Computer Science and Engineering**                November 2020 – Present
Professor Evan Suma Rosenberg's Illusioneering Research Lab

- Developed a Virtual Reality application to increase awareness of social distancing using the Unity engine, submitted and accepted to the IEEE VR 2021 conference.
    - https://ieeexplore.ieee.org/document/9419275

**Research Assistant**, **UMN Computer Science and Engineering**        December 2019 – November 2020
Under Professor Maria Gini on the development of a music station chatbot for the National Association of Broadcasters PILOT Innovation Challenge.

- Awarded funding to create chatbot that could interact with radio show listeners
- Implemented much of the logic of chatbot responses, especially for inquiries about playlist information using the Mindmeld chatbot framework
- Assisted in implementation of a frontend interface for the chatbot through use of Angular

## HONORS/AWARDS

Industrial Affiliates Council Access Scholarship                Fall 2021 – Spring 2022
UMN Gold Scholar                2019 – Present
College of Science and Engineering Dean's List                Fall 2019 – Spring 2021
National Merit Finalist, Washington High School                Spring 2019

## ACTIVITIES

Member, UMN Video Game Development Club                Fall 2021 – Present
Member, UMN Society of Physics Students                September 2019 – Present
Member, UMN Music Production Student Group                March 2020 – Present

## SKILLS

**Programs:** Unity Engine, Windows OS, Linux, Microsoft Office (Word, Excel, PowerPoint)
**Programming Languages:** Python, Java, C/C++, C#, Ocaml

*References available upon request*