



# Bradley Schmitz

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## EDUCATION

**Miami University** – Bachelor of Science and Bachelor of Arts, Oxford, OH *Expected May 2021*

**Majors:** Computer Science and Interactive Media Studies

**Minors:** Music Performance (saxophone) and Music Composition

Cumulative GPA: 4.0/4.0 | University Honors Program | Tau Beta Pi Engineering Honors Society

## UNIVERSITY RESEARCH AND WORK EXPERIENCE

**VR Researcher / Developer – Smale Interactive Visualization Center** *January 2019 – Present*

- Assist Dr. Eric Hodgson in researching and developing a virtual reality medical training simulation for a client
- Focusing on programming, code refactoring, event system, haptic feedback, and user interface
- Collaborate with a 3D modeler / animator to increase simulation engagement

**Teaching Assistant (CSE 386) – CSE Department** *January 2019 – Present*

- Serve as a student resource for enrolled students by answering questions and assisting with labs
- Lead weekly help sessions to reinforce course topics, including linear algebra, ray tracing, and vector-based 3D graphics generation
- Collaborate with another teaching assistant to quickly and accurately grade student labs

**Tutor – Rinella Learning Center** *August 2019 – December 2019*

- Lead over 75 tutoring sessions in the subjects of algebra and trigonometry for first-year students
- Received Level 1 tutor certification through the College Reading & Learning Association

## PROFESSIONAL WORK EXPERIENCE

**Software Developer Intern – London Computer Systems, Cincinnati, OH** *May 2019 – August 2019*

- Collaborated with other developers and testers to implement new features and bug fixes for Rent Manager 12's web-based API
- Created API endpoints, embeds, and filters for retrieving, storing, and deleting data
- Acquired experience in Agile Software Development using SQL, C#, and .NET

**Quality Assurance Intern – London Computer Systems, Cincinnati, OH** *May 2018 – August 2018*

- Identified, analyzed, & documented defects, questionable functions, errors, & inconsistencies in Rent Manager 12's functions, outputs, online screens & content
- Created test plans for properly and thoroughly testing software
- Developed and executed automated test scripts using testing software programs

**Instructor – Putnam County Summer Technology Camp, Ottawa, OH** *May 2013 – May 2018*

- Educated junior high students from Putnam County about modern technology topics, including green energy, robotics, cloud computing, coding, data and privacy, and graphic design
- Collaborated with other instructors to create an enjoyable and positive environment for student to learn
- Specialized in teaching coding and 2D/3D game design through Scratch and Kodu Game Lab

## COURSE PROJECTS

**vrchery: Virtual Reality Archery Game – Developer** *September 2019 – November 2019*

- Created an Oculus Rift virtual reality archery simulation for an Honors course extension in IMS 461: Virtual and Augmented Reality
- Implemented haptic feedback, realistic bow and arrow simulation, and user interface / interaction

**AR Looper: Augmented Reality Loop Machine – Developer**

September 2019

- Created a Vuforia augmented reality simulation for creating custom music loops in IMS 461: Virtual and Augmented Reality
- Implemented five instrument sets with five instruments each, audio effects, and user interface

**Appalogue: Ruby on Rails App Directory – Programmer, UI / UX Designer**

March 2019 – May 2019

- Developed a web-based Ruby on Rails app directory, visible at [appalogue.herokuapp.com](https://appalogue.herokuapp.com), in CSE 201: Introduction to Software Engineering
- Created the interface from scratch using HTML and CSS
- Implemented app view/submission/deletion, user login, user permissions, and star reviews

**MuseScore Interface Redesign – UI / UX Designer**

January 2019

- Evaluated the usability of MuseScore 3.0's interface in IMS 315: User Experience Research
- Conducted tests on MuseScore's interface and experience, and wrote a report analyzing the results
- Utilized Axure RP to redesign MuseScore 3.0's interface and create prototype interfaces for testing

**CAMPUS INVOLVEMENT AND LEADERSHIP EXPERIENCE****Lockheed Martin Leadership Institute – Cohort VIII**

September 2018 – Present

- Selected to be a member of a 3-year cooperative engineering leadership program
- Develop personal, people, and strategic leadership skills, including communication, project management, emotional intelligence, innovation, self-knowledge, and open-mindedness
- In charge the virtual aspects of our upcoming Embracing Change Summit, including videography and livestreaming

**Honors Student Advisory Board**

September 2017 – Present

Vice President

November 2019 – Present

- Collaborate with the University Honors Program and other Honors students to plan social, philanthropic, and academic events for engaging the entire Honors community
- Develop a sense of community and membership within HSAB internally by planning events for HSAB members

Director of Public Relations

November 2017 – November 2019

- Served two consecutive terms as the Director of Public Relations
- Managed HSAB's social media, branding, advertisement, and campus outreach
- Created a recruitment video, a new website, and a branding guide for the organization

**Tau Beta Pi, Ohio Xi Chapter – Social Chair**

May 2019 – Present

- Selected from the top 1/8 of students in the College and Engineering and Computing to join Tau Beta Pi, a national engineering honor society
- Plan and organize social events to bring Tau Beta Pi's members together
- Operate all chapter communication, including emails and social media

**Miami University Musical Ensembles – Saxophonist**

January 2018 – Present

- Perform music with various Miami University Musical Ensembles
- Miami University Jazz Ensemble: Fall 2018 (baritone saxophone), Fall 2019 (1<sup>st</sup> alto saxophone)
- Miami University Symphony Band: Spring 2018 (tenor saxophone), Spring 2019 (tenor saxophone), Spring 2020 (2<sup>nd</sup> alto saxophone)

**Code2Learn – Member**

January 2018 – Present

- Teach local elementary students about coding through fun and easy tutorials
- Utilize platforms like Scratch and Code.org to help students easily learn the basics of coding

## Scholar Leader Program

August 2018 – May 2019

- Selected to be a member of a living-learning community on campus dedicated to service and leadership
- Served on the Programming Cluster, which planned social events for the LLC

## University Honors Program – Honors Ambassador

January 2018 – December 2018

- Welcomed incoming Honors students to Miami University by drafting postcards, emails, and helping at Honors Convocation
- Performed a “takeover” of the Honors social media to promote the University Honors Program

## CONFERENCES AND WORKSHOPS

- **Presidential Career and Leadership Series: Design Thinking for All Careers** – November 2018
- **Perlmutter Leadership Conference** – October 2018

## HONORS AND AWARDS

- **President’s List** – 5 semesters (Fall 2017, Spring 2018, Fall 2018, Spring 2019, and Fall 2019)
- **Top 10 Second-Year Student in the College of Engineering and Computing** – Presented by Tau Beta Pi, May 2019
- **Honors Ambassador Peer Leadership Certificate** – Presented by the Miami University Honors Program, December 2018
- **Top 10 First-Year Student in the College of Engineering and Computing** – Presented by Tau Beta Pi, May 2018
- **Eagle Scout** – Presented by the Boy Scouts of America, February 2016

## SKILLS

- Programming using C#, C++, Java, HTML/CSS, JavaScript/jQuery, PHP, Ruby, R, and SAS
- Software development using Ruby on Rails and the .NET Framework, using Git for version control
- Systems programming in Linux via command-line interface
- Application of agile methodologies to software development and project management
- UI / UX and graphic design using Adobe Illustrator / Photoshop / InDesign and Axure RP
- Video production and editing using Adobe AfterEffects / Premiere
- 3D virtual reality and augmented reality development using Unity and Unreal Engine
- Performance on soprano, alto, tenor, and baritone saxophones, including pieces by Noda, Villa-Lobos, Creston, Ibert, Heiden, and Lunde
- Music composition and sound editing using FL Studio, Finale, Audacity, and Ableton Live