



Bradley Schmitz

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GitHub: github.com/dolphinwarm

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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 | President's List, 7 semesters | University Honors Program

Tau Beta Pi Engineering Honors Society | Lockheed Martin Leadership Institute

PROFESSIONAL WORK EXPERIENCE

ClickTime – San Francisco, CA (remote)

Associate Software Engineer (part-time)

Sep. 2020 – Present

- Develop and maintain frontend and backend code for ClickTime's web application and REST API
- Update front-end webpages and emails templates to match ClickTime's current branding and code formatting

Software Developer Intern

Jun. 2020 – Aug. 2020

- Developed features and performed bug fixes in ClickTime's web application and REST API
- Collaborated with other interns to develop and present a G-Suite Integration to the entire company
- Acquired experience in Agile software development using C# (.NET Framework), JavaScript, Git, Angular, SQL, and other web technologies

London Computer Systems – Cincinnati, OH

Software Developer Intern

May 2019 – Aug. 2019

- Collaborated with other developers and testers to implement new features and bug fixes for Rent Manager 12's REST API
- Created API endpoints, embeds, and filters for retrieving, storing, and deleting database info
- Acquired experience in Agile software development using C# (.NET Framework) and SQL

Quality Assurance Intern

May 2018 – Aug. 2018

- Identified, analyzed, and documented defects, questionable functions, errors, and inconsistencies in Rent Manager 12
- Created and executed automated test scripts using testing software programs

Putnam County Educational Service Center – Ottawa, OH

Summer Technology Camp Instructor

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 students to learn
- Specialized in teaching coding and 2D/3D game design through Scratch and Kodu Game Lab

UNIVERSITY WORK EXPERIENCE

Department of Emerging Technology in Business + Design

Research Assistant and Virtual Reality Developer

Jan. 2020 – Present

- Assist Dr. Eric Hodgson in researching and developing virtual reality and augmented reality simulations via OculusVR, AR Foundation, and Vuforia
- Utilize and maintain VR/AR equipment in the Smale Interactive Visualization Center (SIVC), notably the CAVE, a 4-walled virtual reality "room"

College of Engineering and Computing – Lockheed Martin Leadership Institute

Teaching Assistant (CEC 392: People Leadership II)

Jan. 2021 – Present

- Assist Prof. Louise Morman in leading class and grading labs for Cohort IX of the Lockheed Martin Leadership Institute
- Serve as a “scrum master” for Cohort IX's cohort project “Envision 2040”, a website discussing the possibilities of what 2040 will look like
- Lead weekly labs to help members collaborate and engage with each other

Department of Computer Science and Software Engineering

Teaching Assistant (CSE 389: Game Design and Implementation)

Jan. 2021 – Present

- Assist Dr. Eric Hodgson in preparing labs and projects, answering questions, and grading
- Lead weekly help sessions to reinforce course topics, including Unity fundamentals, C# scripting, and game design techniques

Teaching Assistant (CSE 489: Advanced Graphics and Game Engine Design)

Jun. 2020 – Dec. 2020

- Assisted Dr. Eric Bachmann in preparing labs and projects, answering questions, and grading
- Lead weekly help sessions to reinforce course topics, including OpenGL graphics pipeline, shaders, integrations (FMOD, Bullet physics engine, etc.) and more
- Utilized OpenGL to add features to the C++ game engine, including 2D text and skyboxes

Teaching Assistant (CSE 386: Foundations of Computer Graphics)

Jan. 2020 – May 2020

- Assisted Dr. Eric Bachmann in preparing labs and projects, answering questions, and grading
- Lead weekly help sessions to reinforce course topics, including linear algebra, ray tracing, and vector-based 3D graphics generation
- Collaborated with another teaching assistant to quickly and accurately grade student labs

Rinella Learning Center

Tutor

Aug. 2019 – Dec. 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

RESEARCH AND COURSE PROJECTS

Malone University – Parkinson's VR Training (Honors with Distinction / ETBD Project)

Jan. 2020 – Present

- Research and develop a virtual reality simulation, under the guidance of Dr. Eric Hodgson, for use in a research study by Prof. Lori Cooke about training nurses using VR
- Utilize Unity to program C# scripts, event systems, haptic feedback, user interfaces, audio, and animations for the simulation
- Collaborate with a 3D modeler / animator to increase simulation engagement

Gathering at the Poet's Shack (ETBD Capstone)

Aug. 2020 – Dec. 2020

- Collaborated with other ETBD students to create an immersive and interactive display at Miami University for celebrating the arts and poetry
- Utilized NodeJS, Express, AWS, and other web technologies to develop a web application and API for user-submitted poems
- Created projection-mapped visualizations using TouchDesigner, with integrations for Kinect Azure and Python scripting

Vulkan Independent Study (CSE Departmental Honors)

Aug. 2020 – Dec. 2020

- Studied the Vulkan graphics API for a semester, under the guidance of Dr. Eric Bachmann, to determine if it could be a viable substitute for OpenGL in CSE 489: Advanced Graphics and Game Engine Design
- Programmed the basic framework for a graphics / game engine, using Vulkan and C/C++
- Authored a 50-page report on Vulkan, including its setup, operation, and pipeline

vrchery: Virtual Reality Archery Game (Honors Course Extension)

Sept. 2019 – Nov. 2019

- Created a virtual reality archery simulation using OculusVR and Unity
- Programmed realistic bow-and-arrow firing, haptic feedback, game scoring and flow, and user interfaces using C#
- Utilized prebuilt models and audio to create an immersive and engaging environment for players

COMMUNITY INVOLVEMENT AND LEADERSHIP EXPERIENCE

College of Engineering and Computing – Lockheed Martin Leadership Institute

Sept. 2018 – Present

Cohort VIII

- 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
- Collaborated with other cohort members to prepare and deliver a virtual summit on the topic of embracing change

Honors Student Advisory Board

Sep. 2017 – Present

Vice President

Nov. 2019 – Nov. 2020

- Collaborate with the University Honors Program and other Honors students to plan social, community service, 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

Nov. 2017 – Nov. 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

May 2019 – Present

President

May 2020 – Present

- Selected from the top 1/8 of students in the College and Engineering and Computing to join Tau Beta Pi, the national engineering honor society
- Plan meetings, schedule election and initiation of new members, and represent Tau Beta Pi for Miami University at national events

Social Chair

May 2019 – May 2020

- Planned and organize social events for Tau Beta Pi members, including board game nights and a broomball team
- Operated all chapter communication, including emails, calendars, and social media

Miami University Musical Ensembles

Jan. 2018 – Present

Saxophonist

- Perform music with various Miami University Musical Ensembles
- Miami University Jazz Ensemble: Fall 2018 (baritone saxophone), Fall 2019 (1st alto saxophone), Spring 2021 (1st alto saxophone)
- Miami University Symphony Band: Spring 2018 (tenor saxophone), Spring 2019 (tenor saxophone), Spring 2020 (2nd alto saxophone)
- Miami University Wind Ensemble: Fall 2020 (2nd alto saxophone)

Kode2Learn

Jan. 2018 – May 2019

Member

- Taught local elementary students about coding fundamentals through tools like code.org and Scratch
- Collaborated with other student volunteers to help attendees have fun and learn coding

Scholar Leader Program

Aug. 2018 – May 2019

Member

- Selected to be a member of a living-learning community on campus dedicated to community-based service and leadership
- Collaborated with other Scholar Leaders to plan community service and social events
- Attended numerous conferences and workshops on leadership through the Wilks Leadership Institute

University Honors Program

Jan. 2018 – Dec. 2018

Honors Ambassador

- 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

HONORS AND AWARDS

- **President’s List** – 7 semesters (Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, and Fall 2020)
- **Finalist for the Provost’s Student Academic Achievement Award** – Made it to the final round of judging, June 2020
- **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
- **CSE Departmental Honors** – Tentative; will be awarded at graduation for successful completion of CSE Departmental Honors project
- **University Honors Program: Honors with Distinction** – Tentative; will be awarded at graduation for successful completion of an Honors with Distinction project

SKILLS

- **Programming Languages:** C#, C/C++, JavaScript, Java, PHP, Ruby, Python, R, SAS
- **Frameworks and Technologies:** .NET Framework, AngularJS, React, jQuery, MySQL, PostgreSQL, NodeJS, ExpressJS, OpenGL, GLSL, Vulkan, Ruby on Rails, Git (GitHub, GitLab, Bitbucket), Unity Engine, Unreal Engine, HTML / CSS, OculusVR, OpenVR, AR Foundation, Vuforia
- **Software Development:** MVC web development, REST API development, virtual/augmented reality development
- **Design:** UI/UX design, graphic design (Adobe Photoshop/Illustrator/InDesign), motion and video design (Adobe AfterEffects/Premiere, Notch, TouchDesigner), audio and music design (FL Studio, Finale, Audacity, and Ableton Live)
- **Saxophone:** Performance on soprano, alto, tenor, and baritone saxophones, including pieces by Noda, Villa-Lobos, Creston, Ibert, Heiden, and Lunde