

JOHN THOMAS BACHER

Phone: 765-490-5830 | Email: jbacher18@wooster.edu | jthomasbacher.com

EDUCATION

North Carolina State University, Raleigh NC
First Semester

Master of Computer Science
Anticipated May 2021

College of Wooster, Wooster OH
GPA: 3.3 – Dean’s List 4 semesters
Honors: Math Society – Pi Mu Epsilon; Philosophy Society – Phi Sigma Tau

Bachelor of Arts May 2018
Major: Computer Science; Minor: Philosophy

Relevant Coursework: Computer Graphics, User Interface Design, Data Structures and Algorithms, Algorithm Analysis, Programming Languages, Principles of Computer Organization, Software Engineering: Databases, Linear Algebra, Combinatorics and Graph Theory, Artificial Intelligence, Game Engine Foundations, Computational Applied Logic

RESEARCH EXPERIENCE

Senior Independent Thesis: A Study of Dynamic Difficulty Adjustment for Video Game Balance

Hypothesis: Users perform better and prefer a dynamically adjusted game

- Explored how game balance affects player performance and player enjoyment of games
- Researched dynamic adjustment in standardized testing and video games to establish hypothesis
- Implemented a game engine in C++ utilizing OpenGL and the Allegro windowing library
- Presented findings to community members through oral presentation during symposium

TECHNICAL SUMMARY

Programing Languages: (Proficient) C++, Java, C; (Familiar) C#, Python, Javascript, PHP, SQL

Tools and Libraries: Visual Studio, Eclipse, Xcode, Unity, OpenGL, Allegro

EXPERIENCE

iD Tech Summer Camps – Director Purdue University, Xavier University May 2018 – July 2018

- Managed six instructors, providing constructive feedback and positive reinforcement to improve performance
- Collaborated with staff to implement team building activities, monitor student behavior and maintain student safety
- Resolved disputes between parents of students and iD Tech
- Acted as liaison between iD Tech and host University, answering questions and making requests
- Assumed responsibilities of sick and absent instructors

Student Technology Assistant – Tier 3 College of Wooster October 2015 – May 2018

- Fielded student, faculty, and staff questions regarding computer hardware and software
- Organized and communicated work schedules of all Student Technology Assistants
- Led six technology workshops each year on Game Development in Unity, iOS App Development, 3D Modeling in Blender, and Creating Scientific Diagrams in Adobe Illustrator
- Maintained College of Wooster hardware and resolved software errors

iD Tech Summer Camps – Instructor Purdue University May 2016 – July 2016, May 2017 – July 2017

- Instructed eight students per week in topics such as C++, Java, Assembly Code, Cryptography, Web Development, Game Design, and Computer Graphics
- Guided students’ creation of individual projects including polyalphabetic encoders, password generators, chess, checkers and adventure games