

NICOLAS NORTHWESTERN

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EDUCATION

Bachelor of Arts | **Mathematics**

May 2021

Bachelor of Arts | **Computer Science**

May 2021

Northwestern College | Orange City, IA

Summa Cum Laude, GPA: 3.99/4.0

Technical Competencies: Java, C++, Python, Linux/Unix Command Line

RESEARCH EXPERIENCE

Self-Directed Research Project

August 2020-Present

“Esports: Popularity vs. Complexity through Game Theory Concepts”

Dr. Kim Jongerius, Chair of Mathematics and Physics, Faculty Mentor | Northwestern College | Orange City, IA

- The thesis of the project is that the popularity of an Esport game can be predicted by that game’s complexity. Using the concepts of mathematical game theory, I have developed several complexity models. Each game’s complexity was calculated using each model, then compared with their relative popularity.
- The models developed include: total possible initial conditions, number of interactions the player can have with their virtual character at any given moment, number of concepts a player must keep in mind at all times, and number of times a player must perform a mechanical skill per minute of gameplay.

TEACHING EXPERIENCE

Northwestern College | Orange City, IA

Math Tutor | Peer Learning Center

August 2017-Present

- Assist freshmen through seniors in all mathematics classes, including Calculus III, Logic, and Linear Algebra
- Attend annual tutor strategy training to provide excellent assistance to students with assignment completion, test preparation, and overall concept understanding

Speech Fellow | First-Year Seminar Fellows

August 2018-Present

- Provide one-on-one assistance to first-year students to cultivate excellence in public speaking
- Communicate with professors to identify expectations and provide feedback to students

CAMPUS LEADERSHIP & INVOLVEMENT

Northwestern College | Orange City, IA

Actor | Theatre Department

August 2017-Present

- Contribute to leading roles in an ensemble-focused theatre department to bring an artistic vision to life
Love’s Labour’s Lost, William Shakespeare, 2020 *The Crucible*, Arthur Miller, 2018
Bright Star, Steve Martin & Edie Brickell, 2020 *Museum*, Tina Howe, 2017

Captain | The Black V Improv Team

August 2020-Present

- Plan, direct, and perform in monthly improve/comedy shows, including a Midwest tour in 2019

Varsity Captain | Esports

September 2020-Present

- Compete in *Overwatch League*, providing leadership and expertise and earning title of team captain in 2020

Orientation Staff Leader | Student Activities Council

August 2018-August 2020

- Assisted new students with the transition to college, and planned activities for new students and families
- Facilitated small group discussion among new students and upperclassmen