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Mercedes Sandu

Software Engineer

Portfolio: mercedessandu.com
github.com/mercedes-sandu
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Creative and motivated software and game developer seeking to apply knowledge from startup experience to a dynamic and detail-oriented full stack position.

SKILLS

Tools and Languages	C#, Unity, Java, Python, HTML, CSS, \LaTeX , Blender, Git, Discord API, MySQL, JavaScript, Racket
Quantitative Research	Proof Writing, Discrete Geometry, Artificial Intelligence, Logic, Mathematica, MatLab
Communication	English, Romanian, Spanish

TECHNICAL EXPERIENCE

SOFTWARE ENGINEER / INTERVALLIC, SONGLYBOT

June 2022 — Present

Overture Games

Chicago, Illinois

- Advised and guided team throughout the design and programming process of Intervallic game using Unity and C#
- Assigned relevant tasks to team members with differentiated experience and roles
- Engineered and implemented primary game mechanics, including movement, level progression, and accuracy detection for Intervallic game
- Conceptualized visual aesthetic and design for UI/UX and frontend development of Intervallic game
- Fostered a community for the company through a Discord server, which included SonglyBot, a Discord Python bot used to engage community members in fun minigames and thoughtful conversations

GRADUATE RESEARCHER / ARTIFICIAL INTELLIGENCE & NARRATIVE RESEARCH

March 2022 — Present

Northwestern University

Evanston, Illinois

- Studied and documented the uses of propositional and formal logic in generative software and game artificial intelligence
- Analyzed and explored Dr. Ian Horswill's experimental generative language, Imaginarium, with the intent to expand its logical implications
- Experimented with Imaginarium to discover its technical and logical shortcomings and planned improvements

UNDERGRADUATE RESEARCHER / DISCRETE GEOMETRY RESEARCH

January 2021 — Present

Northwestern University

Evanston, Illinois

- Studied the previous work of Dr. Shuyi Weng and Dr. Laura DeMarco on the folding of two-dimensional polygons into three-dimensional shapes
- Conducted case studies on different shapes and used findings to write formal proofs on conclusions.
- Wrote a formal mathematics academic paper discussing main findings of research on polygons and three-dimensional shapes
- Presented research findings to hundreds of educated enthusiasts

PERSONAL TUTOR / SAT AND COLLEGE APPLICATIONS

June 2020 — Present

- Guided mentees through the most crucial requirements for the college application process, including revising essays and discussing strategies for standardized testing
- Coached mentees by studying which areas of the SAT needed more attention, teaching, and explanation
- Explained all levels of high school mathematics in more comprehensible ways to encourage real-time problem solving

EDUCATION

Master of Science, Northwestern University

Expected June 2024

Computer Science, Thesis Track

Bachelor of Arts, Northwestern University

Expected June 2024

Mathematics and Computer Science Double Major, Chemistry Minor, GPA 3.867

High School Diploma Niles North High School

August 2016 — May 2020

GPA 4.75

AWARDS & PRESENTATIONS

Summer Undergraduate Research Grant

Summer 2022

Dean's List

Spring 2022, Winter 2022, Fall 2021, Fall 2020

Undergraduate Research Exposition

Spring 2021

Northwestern Undergraduate Mathematical Society Presentation

Spring 2021