

MIGUEL WILLIAMS

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Education

Northern Illinois University <i>Ph.D. Student in Computer Science</i>	2023–Present <i>3.606 GPA</i>
Northern Illinois University <i>M.S. Student in Computer Science</i>	2021–Present <i>3.606 GPA</i>
Northern Illinois University <i>B.S. in Computer Science</i>	2019–2021 <i>3.677 GPA</i>
Eastern Illinois University <i>B.S. in Computational Physics</i>	2012–2018

Publications

- (Accepted) Mina Rajaei Moghadam, Mosab Rezaei, Miguel Williams, Gülşat Aygen, Reva Freedman "Investigating Lexical and Syntactic Differences in Written and Spoken English Corpora." 37th International Florida Artificial Intelligence Research Society Conference (FLAIRS), 2024.

Research

Short, Full, Best: Analysis of Different Conference Papers <i>Master's Thesis</i>	2023–Present <i>Dekalb, IL</i>
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- Conducted comprehensive analysis of diverse conference papers to discern linguistic patterns of text complexity among them.
- Engineered Python software to extract textual data from PDF files and compute metrics to gauge text complexity effectively.
- Applied expertise in training BERT, random forest, decision tree, and SVM models to optimize classification processes and enhance task performance.

Mini-games for Computer Architecture <i>Reva Freedman Research Lab</i>	2023–Present <i>Dekalb, IL</i>
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- Designed educational video games using Unity to facilitate the understanding of computer architecture concepts among students.
- Conducted research utilizing Unity-based video games to evaluate their effectiveness as educational tools, contributing valuable insights into their impact on learning outcomes.

Work Experience

Teaching Assistant <i>Northern Illinois University</i>	2021–Present <i>Dekalb, IL</i>
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- Conducted weekly office hours, providing comprehensive support to over 100 students in understanding concepts related to databases, Java programming, assembler, and computer architecture.
- Facilitated effective communication with the professor to stay abreast of current and upcoming course material, ensuring proactive assistance tailored to the needs of the students.
- Demonstrated adept time management abilities, efficiently completing assigned tasks to meet deadlines and deliver high-quality support to students throughout the course.

Full Stack Software Engineer Intern <i>Discover Financial</i>	2020–2020 <i>Riverwoods, IL</i>
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- Collaborated within a team to develop RESTful APIs using React.js, JavaSpring, and MySQL, contributing to the creation of interactive web pages and ensuring smooth data interactions.
- Employed agile scrum methodology to streamline project workflow, fostering collaboration and enhancing project efficiency.
- Implemented cybersecurity protocols, including JSON web tokens, to safeguard sensitive data and protect against potential threats.
- Developed an API solution to efficiently monitor and manage over 100 team members participating in Discover Financial's Code Orange program.

Involvement

Grade Review Committee – Northern Illinois University

Indie Game Developer's Organization – Founder

Skills

Programming Languages – Python, C++, Java, C#, PHP, JavaScript

Utilities – Keras, SciKitLearn, Matplotlib, Git, React.js, Java Spring Boot, MySQL, Huggingface, BERT, Node.js, D3.js, PostgreSQL