

# WILLIAM C. BURGIS

313 N Ashland Ave | Park Ridge, IL 60068 | (224) 531-4314 | [wburgis@nd.edu](mailto:wburgis@nd.edu) | [willburgis.dev](http://willburgis.dev)

## EDUCATION

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**University of Notre Dame**, Notre Dame, IN **May 2023**  
B.S., College of Engineering; Dean's List Honors (6 semesters, Fall 2019 – Spring 2022) **Cumulative GPA: 4.00/4.00**  
**Major:** Computer Science **Minor:** Engineering Corporate Practice  
**Maine South High School**, Park Ridge, IL **May 2019**  
Valedictorian (ranked #1 in class of 650 students); National Merit Scholarship Recipient; ACT: 35 **Cumulative GPA: 4.96/4.00**

## PROFESSIONAL EXPERIENCE

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**Booz Allen Hamilton**, *Enterprise Software Development Intern*, Annapolis Junction, MD **June 2022 – August 2022**

- Built a full-stack web application to detect hacked and bot accounts, spam content, and threatening language on social media
- Utilized skills in Python, Data Science, GitHub, SQL, Natural Language Processing (NLP), TensorFlow, Linux, and JavaScript
- Voted by experienced Booz Allen leaders as the #1 best project out of 11 projects developed in the office over the summer

**Center for Network and Data Science**, *Co-Author and Research Assistant*, Notre Dame, IN **January 2021 – August 2022**

- Co-Author of "Deep Ensembles for Graphs with Higher-order Dependencies" ([link attached here](#))
- Conducted research on Graph Neural Networks (GNNs) and the roles that higher-order dependencies play within them
- Contributed to the creation of GrowHON and HONGNN models and determined their effectiveness on various data sets

**University of Notre Dame**, *Data Structures Teaching Assistant*, Notre Dame, IN **August - December 2021**

- Hosted weekly office hours to aid students with any questions they have regarding the Data Structures course material
- Attended course lectures and labs to give feedback and further students' comprehension of the material as they learn it

**ShareBuilder 401k**, *Software Engineering Intern*, Seattle, WA (remote) **June - August 2021**

- Collaborated with the Engineering Team to integrate the Solo-K Saver plan into the Sales Funnel, interfacing it with several APIs
- Implemented skills in HTML, CSS, and JavaScript to improve the Small-Business and Enterprise Marketing Sites
- Utilized NodeJS, Puppeteer, Docker, Terraform, and Amazon Web Services to create an automated test that ensures the Sales Funnel quote and purchase processes are running smoothly every day

**AWS Data Structures Preternship Project**, *Software Engineer*, Notre Dame, IN **March - May 2021**

- Developed, implemented, and tested a program to scrape recent and popular Tweets about a selected company using the Twitter API, interfaced it with AWS Comprehend, and created an algorithm to determine that company's overall trending sentiment
- Identified critical dependencies and design considerations and delivered weekly code reviews and professional memorandums

## LEADERSHIP, PROJECTS, & ACTIVITIES

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**Center for Network and Data Science: iTREDS Program**, *iTREDS Scholar*, Notre Dame, IN **March 2021 - Present**

- Restructuring the Political Data Yearbook (PDYi) database to comply with FAIR standards and embrace linked, open data
- Intertwining ethics and social responsibility with delivering data-driven, impactful solutions to real-world problems

**University of Notre Dame Data Science Dept.**, *Co-Author and Researcher*, South Bend, IN **August - December 2021**

- Co-Author of "Predicting U.S. County Vaccination Rates with Classifiers" ([PDF here](#)); voted best project out of 18 submissions
- Employed Random Forest, Neural Network, Naïve Bayes, CART, Decision Tree, SVM, and KNN classification methods with 5-fold cross-validation to predict vaccination rates of counties across the U.S.; determined Random Forest to be the most optimal

**Camp Kesem Notre Dame**, *Counselor*, South Bend, IN **September 2019 - Present**

- Raising money to provide cost-free camp to children whose parents have been impacted by cancer
- Served as a counselor during the camp over the summers of 2020 and 2021 (took place online due to COVID-19 pandemic)

**Student International Business Council**, Notre Dame, IN **September 2019 - November 2020**

**Goldman Sachs Corporate Strategic Advisory Project – Travel Team Analyst** **September - November 2020**

- Created a C program to project 5 years of revenues for Dick's Sporting Goods (NYSE: DKS) using linear regression of a series of analyst reports; ultimately valued Dick's at an implied share price of \$54.76 and an enterprise value of \$5.63B
- Conducted M&A, LBO, and equity analyses; proposed that Dick's should acquire two private companies, Custom Ink (\$872M) and Hudl (\$415M), to expand their online presence, customization segment, and involvement with youth sports
- Worked as a travel team analyst for the Deloitte Consulting (Spring 2020) and GTCR Leveraged Buyout (Fall 2019) projects

## SKILLS AND INTERESTS

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**Technical Skills:** Python, C, C++, GitHub/Gitlab, Data Science, Bash, Machine Learning, HTML/CSS, JavaScript, Microsoft Office  
**Relevant Courses:** Operating Systems, Systems Programming, Data Structures, Data Science, Theory of Computing, Probability  
**Interests:** Software Development | Premier League Soccer | Nonfiction | Waterskiing | Fishing | Fitness | Cooking | Fantasy Football