

Nathan Zhao

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EDUCATION

Rice University

Houston, TX

Bachelor of Science in Computer Science, Bachelor of Arts in Sports Analytics - 3.85 GPA

Aug. 2023 – May 2027

RELEVANT COURSEWORK

Introduction to Computer Science, Data Structures & Algorithms, Calculus I, Calculus II

TECHNICAL SKILLS

Languages: Python, C, Java, JavaScript, HTML/CSS, R

Developer Tools: Git, VS Code, Visual Studio, Node.js

Libraries: NumPy, JQuery, pandas, Matplotlib, PyGame

PROJECTS

Rice Sport Analytics Team (RSAT) | *Python, Excel, Film Analysis*

Sept. 2023 – Present

- Applying comprehensive algorithms to 300+ current college sport data sets and forming visualizations/models, using Python and Excel, to communicate essential in-game conclusions to teams in accessible and efficient ways

Elucidating the Transmission of a Bacterial Infection | *Python, Spanning Trees*

Feb. 2024 – Apr. 2024

- Using epidemiological tracking data of patient genomes, built a program that computed the rooted directed minimum spanning tree (RDMST) of weighted graphs that represented an antibiotic-resistant bacterial infection to elucidate the most probable transmission map of the disease

LASSO Sports (Data) Analytics | *Python, Matrices, Data Science*

Oct. 2023 – Dec. 2023

- Assembled a program in Python to estimate the wins of a baseball team in a given season by constructing a matrix model through computing weights for 1000+ historical data sets
- Employed a statistical algorithm to compute a model that identifies the most prominent and important trends to increase future predictive validity with new data sets

VEX Robotics | *Python, Robotics*

Sept. 2020 – May 2023

- Developed an autonomous robot program in Python using the VEXcode library to compete in VEX Robotics competitions with precise robot movement and consistent object detection software to complete tasks effectively
- Coordinated with a team to design an active robot program in Python in control of complex physical expressions

EXPERIENCE

Software Engineering & Cloud Computing Extern

Mar. 2024 – Apr. 2024

Google

Houston, TX

- Explored, in an educational role under Cloud Architect Karl Smayling, software engineering, sales engineering, cloud architecture, and Google Cloud solutions to gain insights on how Google executes organizational transformations that fuel innovation, enable agility, and maximize ROI

Deputy Director & IT Director

Sept. 2020 – Mar. 2023

Calgary Science Spelling Challenge (csschallenge.ca)

Calgary, Canada

- Devised a website using Javascript, HTML/CSS for outreach and communication with over 100 competitors
- Managed tabulation logistics for the tournament using Excel & Google Sheets to efficiently apply preexisting sorting algorithms and weightings to the results to find top competitors and teams in each round and overall
- Led the live event as the primary executive speaker for the team, communicating essentials to competitors

Vice President of IT

Nov. 2020 – Feb. 2021

BundleUp – A Junior Achievement Company

Calgary, Canada

- Fabricated an online product-distribution mechanism using Python, a Google Sheets API, and QR codes, and conceptualized a website using Javascript and HTML/CSS, to sell bundles of digital coupons on behalf of struggling local businesses to highschool students during the pandemic
- Led over 15+ employees – profited over \$2000 in revenue and revitalized the local varsity area

Speech & Debate Executive

Sept. 2021 – May 2023

Western Canada High School

Calgary, Canada

- Competed at Canadian National level tournaments and reached podium rankings multiple times
- Organized weekly meetings and monthly city-wide tournaments for the Alberta Speech & Debate Association