ARRIS XIE

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EDUCATION

Bayview Secondary School IB Diploma GPA: 98.33% OSSD Richmond Hill ON, CAN Sept 2020 - Jun 2024

EXPERIENCE

Lumiere Education

Remote Research Scholar August 2022 - Feb 2023

- Analyzed a financial transactions dataset using Python and trained a machine learning classification model to detect fraudulent financial organizations with an accuracy of over 99% and a false positive rate of less than 0.001% out of 2722703 total predictions through XGBoost's decision-tree-based gradient boosting.
- Wrote and published a 5000 word research paper in the Journal of High School Science under the mentorship of professor Maria Konte, a computer science PhD from Georgia Tech.

Inspirit AI Remote Oct 2022 - Jan 2023 $AI\ Ambassador$

- Connected with 500+ passionate high school students around the world on the applications of AI with industry professionals.
- Outreached with peers and my local community to promote AI education and interest.
- Conducted research and shared a presentation on how computer vision is used for self-driving cars, explaining multiple approaches including neural networks, CNNs, transfer models like VGG16, and YOLO, a leading object detection algorithm.

Bayview Secondary School Music Council

Web Committee Lead

Richmond Hill, Ontario September 2022 - Present

- Webmaster for school's music website using Figma and React/NextJS. Helped in creating and managing the official school music Discord bot using NodeJS.
- Led a team of designers and programmers to create a webpage that handles signing out and returning school instruments in a SQL database.

SKILLS

Python, C++, Java, Javascript, HTML/CSS, SQL, Dart, R Programming Languages: Server/Web: React, NextJS, Express, NodeJS, MongoDB, Firebase

Tools: Git, Postman, Google Cloud, Unity

PROJECTS

Year of the Habit ReactJS, NextJS, OpenAI

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- A new year's resolution web app that allows users to receive a personalized plan for any resolution through OpenAI's davinci-003 natural language processing model.
- Data from the API is fetched and displayed onto the React frontend with a custom progress tracker and checklist for each specific resolution.
- Winner at the new year's themed hackathon See You Later, Hackulator 2

Frood React, Redux, ExpressJS, NodeJS, MongoDB

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- A MERN stack web app that allows people to find recipes based on the ingredients they currently have in their kitchen, easing the decision making process for dinners.
- Created a REST API with NodeJS to handle user authentication with JWT, user input of ingredients, and querying through MongoDB to filter the recipes.

NatureReads R



- An R package that illustrates geographic data from the NatureCounts dataset, one of the largest databases on Canadian birds managed by the non-profit Birds Canada.
- Processed the geographic data using the dplyr and sf packages, and visualized the information through meaningful maps, graphs, and tables using the Plotly library.
- Winner at the hackathon KuriusHacks and a challenge from Birds Canada to develop an R package that supports their data science team.