Joseph Al Fartosy

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Education

University of Alberta **Sep. 2020 – March 2025**
Bachelor of Science in Computer Science *Edmonton, Alberta*

Relevant Coursework

- Data Structures
- Software Methodology
- Algorithms and Data Structures
- Database Management
- Artificial Intelligence
- Systems Programming
- Computer Architecture

Experience

Oxford Tutoring **September 2022 – Current**
Algorithm Instructer *St.Albert, AB*

- Utilized AutoML and Gaussian Processes (Auto GP) to efficiently source and curate highly relevant educational resources and teaching materials, enabling personalized, adaptive learning experiences and enhancing student engagement and understanding in tutoring sessions.
- Implemented various educational technologies and programming tools to augment learning experiences and simulate real-world coding environments.
- Employed programming to analyze student performance data, enabling the creation of personalized learning paths and goal-oriented strategies to optimize learning outcomes and progress.
- Garnered positive feedback from students and the agency for innovatively integrating programming into the tutoring process, contributing to enhanced learning experiences and outcomes.

Student Team for Alberta Rocketry Research **September 2023 – Present**
Software Developer *Edmonton, AB*

- The Student Team for Alberta Rocketry Research (STARR) is a team of like-minded students from an array of disciplines and faculties who have come together with the common goal of expanding Alberta's space industry through the development, testing, and launching of high altitude sounding rockets.
- Collaborated in Multidisciplinary Team: Worked within the Student Team for Alberta Rocketry Research (STARR), focusing on the development, testing, and launching of high altitude sounding rockets to expand Alberta's space industry.
- Developed Simulation Software: Utilized Java to create advanced simulation models for analyzing and predicting rocket trajectories and flight patterns, contributing to efficient and accurate rocket design.
- Implemented Advanced AI Algorithms: Leveraged Python along with machine learning frameworks such as PyTorch and TensorFlow to develop AI models, focusing on achieving autonomy in rocket and rover navigations and operations.
- Autonomous System Development: Integrated AI models into rocket and rover systems to accomplish autonomous navigation, data acquisition, and operational tasks, optimizing for efficiency and reliability.

Projects

eLibrary | *Javascript, React, Expressjs*August 2023

- Developed a comprehensive eLibrary Platform, leveraging
  React for seamless front-end user experiences and Express.js to establish a robust back-end service, enhancing the overall functionality and responsiveness of the platform.
- Utilized React to create dynamic, intuitive, and user-friendly interfaces, enabling users to navigate, access, and manage a vast collection of electronic resources efficiently.
- eLibrary

AiTranscriber | *Python, OpenAi API* **September 2023**

- Developed an advanced AutoTranscriber to stay on top of lecture videos and facilitate efficient studying and review by converting spoken content into accurate, written transcriptions.
- Employed Python to build and integrate the core functionalities, incorporating the OpenAI API to deliver real-time, accurate transcriptions of lecture videos, to then use a gpt that summarizes the transcriptions and make me study notes.

ePortfolio | *Javascript, Html, CSS* **September 2023**

- Created a professional ePortfolio to showcase my skills, experiences, and projects, serving as a dynamic, interactive resume for prospective employers and collaborators.
- My ePortfolio

Technical Skills

Languages: Python, Java, C/C++, JavaScript, SQL,
Developer Tools/Frameworks: React, NodeJs, ExpressJs, Docker, Pytorch, Git, Firebase, Linux, VS Code