JUN CHAO

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Data Analysis: Python, Matplotlib, Pandas, Numpy
Machine Learning: Scikit-Learn, TensorFlow
Web Development: React, Javascript, Fast API, PostgreSQL, Tailwind, Go
Robotics: Linux, ROS, OpenCV, C++, Arduino

EDUCATION

University of Calgary **Sept 2022– May 2027**
Bachelor of Science - Electrical and Computer Engineering Calgary, AB

- GPA: 3.89
- NSERC USRA
- UofC Rookie of the Year

EXPERIENCE

Data Analysis Researcher **May 2023– Present**
University of Calgary- Energi Simulation Centre for Geothermal Systems Research Team Calgary, AB

- Developed and improved the physics-based model "SoftSenstor" (SS) for analyzing real time drilling data.
- Achieved exceptional accuracy in predicting subsurface drilling rpm of 85% contributing to cost reduction and efficiency.
- Integrated analysis work-flows into a user-friendly, interactive React front-end using FastAPI and PostgreSQL.
- Implementing neural networks for additional machine learning based features.

Mathematics Tutor **Nov 2021– Present**
Self-Employed Calgary, AB

- Facilitate individual 1 on 1 tutoring sessions with students in different mathematical subjects.
- Developed and implemented a scheduling system for on-demand tutoring throughout the week.
- Lead specialized sessions for provincial and national mathematical competitions for ambitious students.
- Brainstormed marketing strategies to acquire new students through various social media platforms.

First Year Representative **Sept 2022– May 2022**
University of Calgary - Engineering Student Society Calgary, AB

- Selected as the first year representative to advocate, convey & voice the concerns of the cohort.
- Chosen to attend the Canadian Engineering Leadership Conference to represent the University of Calgary.
- Worked with the Vice President Internal as a Graduation Director to help coordinate the grad banquet
- Shadowed Vice President of Technology and contributed to the development of a clubs website

PROJECTS

Amazon Web Services Race Car **Oct 2022– May 2022**
University of Calgary - Deep Racer Calgary, AB

- Implemented reinforcement machine learning algorithms in Python to optimize lane positioning
- Crafted a highly effective reward function aimed at enhancing lane positioning.
- Analyzing data and fine-tuned the reward function to maximize effectiveness
- Received scholarship opportunities due to achieving competitive lap times using my reward function

Software Lead: Project Burnout **Jan 2022- Present**
University of Calgary -AC Robotics Calgary, AB

- Successfully fundraised more than $2000 dollars through participation in "Hack the House" a furniture motorization challenge.
- Utilized ROS (Robot Operating System) and Linux to construct a resilient software framework prioritizing both flexibility and efficiency.
- Engaged in extensive research involving computer vision and LiDAR technology to enhance sensor-based object detection capabilities
- Developed a virtual environment using Gazebo and RViz to simulate real-world scenarios. facilitating effective training exercises.