LIWEI FENG

liwei4@ualberta.ca +1 7807296662 Edmonton, AB

HIGHLIGHTS

- More than 5 years of comprehensive knowledge and rich practical experience in Telecommunications Engineering polished through bachelor's and master's study
- Demonstrated strong project management and teamwork skills as well as great stress resistance ability during Students Innovation and Entrepreneurship Program
- Experienced with Matlab, JavaScript, Rust, R, Python, and C in multiple projects and able to learn new technologies quickly
- Developed excellent leadership and communication skills as the President of a Volunteer Club and organized various volunteer activities

EDUCATION

University of Alberta, Edmonton, Canada September 2021 - May 2023

- Major: Communications, Electrical and Computer Engineering
- Degree: Master of Engineering
- GPA: 3.9

Civil Aviation University of China, Tianjin, China September 2016 - June 2020

- Major: Telecommunication Engineering, College of Electronic Information and Automation
- Degree: Bachelor of Engineering
- GPA: 4.0

WORK EXPERIENCE

Internship in Northwest Air Traffic Control Bureau July 2019

- Monitored and maintained communication network servers on an hourly basis to ensure the safety of airplanes
- Assisted Senior Network Engineer in identifying and resolving network issues according to Network Monitoring System and test equipment like a multimeter
- Recorded and collected various daily network data and documents in network center
- Learned about radar surveillance, communication, automation, navigation, and power supply used in civil aviation and their principles of operation

RELEVANT PROJECTS

Action to Motion with VQ-VAE and Transformer - Python September 2022 - December 2022

A motion synthesis and generation technology that utilizes a machine learning model to enable developers to visualize action motions by simply inputting the corresponding action category

- Implemented a novel approach using VQ-VAE and Transformer to generate human motion and evaluated the performance of our model compared to other successful models for determining future potential
- Trained our model on three diverse datasets to ensure its potential for high performance in future applications

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Bird Flight Dynamic Simulation&Micro-Doppler Feature Enhancement - Matlab December 2019 - May 2020

A radar-based technology that detects and recognizes birds, reducing the risk of bird strikes and potential threats from bird-like aircraft, to ensure the safety of airplanes

- Examined the structure and flight characteristics of birds to formulate birds' dynamic flight model and the corresponding radar echo model which are suitable for the most bird to enhance real-life usage
- Improved the micro-Doppler features of bird radar echo signals using the Alternating Direction Method of Multipliers (ADMM) algorithm to address common real-life issues such as low signal-to-noise ratio and low sampling rate
- Utilized Short-Time Fourier Transform to extract micro-Doppler features of birds and analyze their size and flight direction, assisting pilots in making informed decisions

Spherical Robot - Students Innovation and Entrepreneurship Program September 2018 - November 2019

A ball-shaped enclosed robot with good sealability, high moving flexibility, and strong stability, suitable for future exploration of outer planets and detection of hazardous environments

- Designed the overall structure of the robot, determining its size, weight, and materials, and incorporating a gyroscope into the circuit to ensure smooth and flexible movement
- Utilized the Zigbee wireless communication module and DL_LN32 ad hoc network wireless communication module to establish reliable communication between computers and each robot
- Assisted the team leader in developing a control system, power system, functional modules, and a user-friendly interface to ensure the successful and robust operation of the robot
- Demonstrated strong project management skills by effectively managing project funds, organizing project plans, coordinating team cooperation, and efficiently adjusting project schedules in response to unexpected team changes
- Developed a comprehensive user manual and filed a patent application to support future business use and protect the intellectual property of the technology

SKILLS

- Languages: English, Chinese
- Programming Languages: JavaScript, Matlab, Python, Rust, HTML, CSS, ES6, R, C, Verilog
- Software: Visual Studio Code, GitHub, SPSS, 3DS MAX, Quartus, Keil, protégé, R studio, Protel

EXTRACURRICULAR ACTIVITIES

Volunteer Club of CAUC September 2017 - September 2019

- Demonstrated great leadership and organizational skills by organizing a series of volunteer events, including animal protection events, paper airplane coloring event, and visiting programs for seniors for creating a positive impact on society as the President of the club

College of Electronic Information and Automation Volunteer Association May 2018 - November 2018

- Visited MingQiang Special School to help children with autism and learning disabilities every Friday afternoon by playing games, drawing and singing with them to improve their social skills and create a positive growth environment