Jamie Laguerta

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EDUCATION

University of British Columbia· Vancouver, British Columbia, Canada (Sept 2020 - April 2024)
BASc, Integrated Engineering
Major in Computer Engineering and Minor in Mechanical Engineering

Key Courses: Digital Systems and Design (SystemVerilog), System Software Engineering (Python),
AI and Machine Learning Applications in Manufacturing (Python).

WORK EXPERIENCE

ATR · Kyoto, Japan (Oct 2022 - Aug 2023)
Research Intern
- Assisted in conducting multi-modal neuroergonomics experiments using electroencephalogram (EEG), electromyography (EMG), motion capture systems, and foot force technologies.
- Developed a prototype microcontroller-based laser trigger system in C++ to conduct experiments.
- Wrote Python scripts to organize and pre-process experimental log files.
- Configured and calibrated motion capture system using Xsens MTw Awinda accelerometer-based sensors and VIVE position trackers.

GEA Group · Richmond, British Columbia, Canada (May 2022 - Aug 2022)
QHSE Intern
- Tracked project completion for lean analysis to improve quality and efficiency.
- Helped facilitate preparations for safety inspections in accordance with recommendations made by external auditors.

PROJECTS

Demining Rover
4th year Capstone Engineering Team Project (Sept 2023 – April 2024)
- Led the design of the Flagger mechanism for an autonomous landmine detection rover.
- Developed servo-controlled actuation for precise mine marking in desert terrains.
- Tested and refined system functionality to ensure operational reliability.

TECHNICAL SKILLS

- **Languages:** Python, C#, C++, Verilog/System Verilog
- **Frameworks:** TensorFlow, .NET
- **Tools:** Git, docker, VS Code, Visual Studio, PyCharm, PlatformIO, Quartus Prime, ModelSim
- **Libraries:** NumPy, pandas, scikit-learn, PuLP