

MUHAMMAD-ALFATIH OLANIYAN

Prince George, B.C. • +1 (236) 331-8356 • molaniyan@unbc.ca

GitHub: mola73 • LinkedIn: Muhammad-Alfatih Olaniany

## PROFILE

Computer Science student with hands-on experience in **software engineering, data science, and human-robot interaction**. Skilled in Python, Django, and ROS for developing intelligent systems. Passionate about building **scalable, data-driven applications** that merge technology, learning, and human-centered design.

## SKILLS

- **Languages:** Python, Java, JavaScript, C Seaborn
  - **Frameworks:** Django, ROS
  - **ML/Data:** scikit-learn, pandas, NumPy, Matplotlib, APIs
  - **Web/Tools:** Git, HTML/CSS, Android Studio, REST APIs

## EXPERIENCE

Research Assistant, UNBC Robotics Lab

*Jun 2025–Present*

- Collaborated in a team to refine and deploy 10+ autonomous educational web games using **HTML, JavaScript, Django, and ROS** for the QTrobot.
  - Built **real-time APIs** enabling robot–web interaction with synchronized **speech, gesture, and emotion feedback**.
  - Designed **data-logging systems** for large-scale analytics across 150+ child participants, supporting human–robot interaction research.
  - Improved **UX design, reliability, and automation** for unsupervised classroom robot deployments.
  - Strengthened expertise in **full-stack development, robotics integration, and data-driven analysis**.

Data Science Intern, Oeson Co.

Jan–Apr 2025

- Developed and compared **Logistic Regression** and **Random Forest** models to analyze healthcare and marketing datasets.
  - Automated **data preprocessing**, **feature balancing**, and **visualization** pipelines in Python, reducing manual analysis time by 40%.
  - Gained practical experience in **ML workflow design**, **data manipulation** and **analysis**.

Project Developer, UNBC

Jan 2023–Present

- Built **educational and recreational games** integrating Python, Java, and Django for research and classroom learning.
  - Designed projects including a **multithreaded Snake game**, an **Android racing app**, and a **heart-disease classifier**.
  - Learned principles of **software architecture, performance optimization**, and **user-centered design**.

PROJECTS

Robots in the Wild – HRI 2026 Study

- Co-developed **ROS–Django integrated games** for 150+ child participants in an autonomous classroom study.
  - Implemented **ArUco-based login, emotion feedback**, and analytics for behavior tracking and engagement analysis.
  - Assisted in study execution and data collection; co-author of “*Social Robots on the Loose*” (ACM HRI 2026).

## Overstimulation Analysis – Capstone

- Applied machine learning on 2,000+ lifestyle records, achieving **91% accuracy** with a Random Forest model.
  - Identified predictive features including **screen time, stress level, and sleep duration**, informing health interventions.

- Demonstrated ability to translate real-world data into actionable insights using Python-based ML pipelines.

## EDUCATION

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**BSc in Computer Science**, University of Northern British Columbia

Relevant Coursework: Algorithms, Machine Learning, Data Structures, Software Engineering

*Expected Dec 2025*

## CERTIFICATIONS

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**Machine Learning Foundation Certificate**, UNBC–RoboGarden

*Jan 2025*