

# MUHAMMAD-ALFATIH OLANIYAN

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## PROFILE

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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

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- **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

## EXPERIENCE

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### 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

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### 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

*Expected Dec 2025*

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

## CERTIFICATIONS

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

*Jan 2025*