



Siddhartha Lama

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Portfolio Website: [GitHub](#) | **LinkedIn Profile:** [LinkedIn](#) | **Address:** Helsinki, Finland

• WORK EXPERIENCE

INTERN – WIZENSE LTD (15/02/2024 – 15/08/2024 Vantaa, Finland)

- Labelled 8,000+ images using **Google Cloud Vertex AI** on **Google Cloud Platform (GCP)**.
- Trained data with **AutoML**, selecting optimal machine learning algorithms.
- Built an object detection AI model (85% accuracy) to identify 10+ types of underground pipes, probes, and fiber cables.
- Researched and developed algorithms for 2D LiDAR ditch depth measurement with GNSS RTK integration.
- Tools and technologies used: **Python, C++, ESP32, Vertex AI, Google Cloud Platform (GCP), LiDAR, GNSS RTK module.**
- **GitHub:** [LiDAR Depth Measurement](#) | **Website:** wizense.com | **Contact:** jussi@wizense.com

INTERN – METROPOLIA UAS (12/09/2023 – 12/02/2024 Vantaa, Finland)

- Developed image classification pipeline using Google Cloud Platform, Vertex AI, and AutoML.
- Tools and technologies used: Google Cloud Platform, Vertex AI, AutoML, Python, Node JS, Cloud Functions.
- **GitHub:** [Image Classification Pipeline](#) | [Report](#) | **Website:** [AloT Garage](http://AloTGarage) | **Contact:** erkki.rasanen@metropolia.fi

• EDUCATION

BACHELOR OF IT ENGINEERING (SMART IoT SYSTMES) - METROPOLIA UAS (18/08/2021 – 18/06/2024 Vantaa, Finland |
Final Grade: 4.25/5 | Credits: 240 required ECTS, completed 296 ECTS)

- **Relevant Courses:** IoT Security, Digital Signal Processing, Sensor Physics, Object-Oriented Programming in IoT Devices, Probability and Statistics, Artificial Intelligence with Python, AWS Cloud.
- **Thesis:** [Greenhouse Automation and Monitoring](#) – Developed a cost-effective IoT-based automation system for Nepali farmers using Raspberry Pi and affordable sensors. Tested real-world implementation, analysing sensor data and plant growth over 28 days with manual system. **Thesis grade: 5 / 5** | **GitHub :** [Greenhouse Automation Thesis](#)
- **Tools and Technologies Used in Thesis:** Python | Matplotlib | Pandas | Raspberry Pi | Soil Moisture Sensors | Temperature Sensors | Humidity Sensors | Cayenne IoT Platform | Real-time Data Processing | Actuators (Fan, Light, Water Pump)

MASTER OF SCIENCE IN TECHNOLOGY (TELECOMMUNICATION ENGINEERING) – VAASA UNIVERISTY (01/09/2010 – 19/06/2013 Vaasa, Finland | Thesis Grade: 3/5 | Credits: 120 required ECTS, completed 121 ECTS)

- **Relevant Courses:** Advanced Course in Signals and Systems, Stochastic Processes, Digital Communication, Radio Resource Management, Cryptography, Computer Simulation in Communication and Systems, Mobile Communication Services and Systems.
- **Thesis:** [PAPR in LTE Uplink: Problem and Improvement](#) – Researched and proposed solutions to reduce the Peak-to-Average Power Ratio (PAPR) in LTE uplinks to improve system efficiency and performance.

BACHELOR OF ELECTRONICS AND COMMUNICATION ENGINEERING – POKHARA UNIVERISTY (01/08/2005 – 01/08/2009, Pokhara, Nepal | Final Grade: 2.96/4 | Credits : 125 credit hours)

- **Relevant Courses:** Digital Signal Processing, Signal & System, Analog Communication, Digital Communication, Probability and Statistics, Electromagnetic Fields & Waves, Computer Networks, Numerical Methods, Filter Design.
- **Project:** Developed an end-to-end communication system using an RF module as part of the major eighth-semester project. **Grade: A (4/4)**

• DATA ANALYSIS/MACHINE LEARNING-BASED PROJECTS

[ML-PORTFOLIO WEBSITE](#)

- Hosted an interactive portfolio showcasing my data analysis and machine learning projects.

[EDA ON INCOME DATASET](#) | [EDA ON TITANIC DATASET](#)

- Conducted exploratory data analysis (EDA) on large datasets, visualized key patterns, and derived actionable insights.

[COVID-19 DATA ANALYSIS USING SQL](#)

- Analyzed COVID-19 data on cases, deaths, and vaccination rates across countries and continents.

[IRIS FLOWER CLASSIFICATION](#)

- Developed a **machine learning model** using the Iris dataset to predict flower species based on sepal and petal dimensions. [Deployed website](#)

[TITANIC SURVIVAL PREDICTION](#)

- Built a **machine learning model** using Random Forest algorithm to predict passenger survival on the Titanic using gender and ticket class as features. [Deployed website](#)

• IOT AND SIGNAL PROCESSING-BASED PROJECTS

[CO2 MONITORING AND CONTROLLING SYSTEM FOR GREENHOUSE](#) | [Source Code](#) | [Report](#)

- Participated in **Vaisala Hackathon**, designing a CO2 control system using **rotary encoder** to set CO2 setpoints.
- Automated valve for CO2 injection and visualized sensor data on **ThingSpeak IoT Cloud Platform** using **MQTT**.
- **Tools and Technology Used** : RTOS, Co2 sensor, Temperature and Humidity Sensor, LPC 1549 Microcontroller.

[SMART BIOMETRIC DOOR LOCK SYSTEM](#) | [Source Code](#)

- Designed and developed a Smart **Biometric Door Lock** system using a fingerprint sensor for authentication and an ESP32 microcontroller to control a solenoid lock.
- Integrated with the **Cayenne IoT cloud platform** for remote monitoring, control, and user management.
- **Tools and Technologies Used**: ESP32, Fingerprint Sensor, OLED Module, Solenoid Door Lock, Cayenne IoT, Arduino IDE, C++.

[WEB UI FOR ABB VENTILATION CONTROLLER](#) | [Source Code](#) | [User Manual](#)

- Developed a **web-based interface** for interacting with the ABB Ventilation Controller simulator, enabling real-time control in automatic and manual modes.
- Integrated **user authentication** and dynamic real-time status display for ventilation control.
- **Tools and Technologies Used**: Node.js, Python (controller.py, VSS.py), HTML, CSS, EJS, JavaScript.

• CERTIFICATION

- [AWS Cloud Foundation](#) | [CCNA: Enterprise Networking, Security, and Automation](#) | [CCNA: Switching, Routing, and Wireless Essentials](#) | [IoT Security Certificate](#) | [Data Science with Python Certificate](#) | [Certified ScrumMaster® \(CSM®\) - CERTIFIED BADGE](#)

• LANGUAGES SKILLS

- **English**: C2 (Proficient user)
- **Finnish**: B1 (Independent user)