

# Lucius Caldenhoven Loayza

Lucius.caldenhoven@ucsp.edu.pe | +51 929905737  
[github.com/ElpibeeLu](https://github.com/ElpibeeLu) | [linkedin.com/in/Lucius](https://linkedin.com/in/Lucius)

## Skills Summary

---

**Languages:** C/C++ (3 years), Python(3 years), SQL(1 year), MongoDB(1 year)

**Technologies & Tools:** GitHub, TensorFlow, Keras, PyTorch, OpenGL, OpenCV, Jupyter Notebook, Dask

**Platforms:** Google Colab, Docker, VS Code, IntelliJ IDEA, Jupyter Notebook, Google Colab, Docker, PyCharm

**Soft Skills:** Problem-solving, Critical thinking, Team collaboration, Effective communication, Adaptability, Leadership, Time management, Attention to detail, Creativity.

## Education

---

**Universidad Católica San Pablo**

Computer Science

March 2021 - Present B.E. in

**CGPA:8.51/10**

Relevant Coursework:Machine Learning, Data Mining, Advance Data Structures and Algorithms, Information Retrieval, Image Processing

## Work Experience

---

**Teacher Assistant**

August 2022 – Present

Universidad Católica San Pablo(Arequipa-Perú)

- Assisted over 50 students in enhancing their problem-solving skills and improving coding efficiency, focusing on C++ and Python.
- Provided expert guidance on algorithm optimization and efficient data structure implementation, resulting in improved class performance by 30%.
- Designed and delivered supplementary materials and hands-on exercises, increasing engagement and understanding in core computational concepts.

## Project

---

- Violence Detection in Videos Using Transformer Networks (2024):** Designed and implemented a system to detect violence in videos leveraging transformer networks. Preprocessed video frames and utilized a pre-trained transformer model for feature extraction. Developed the system using C++ and CUDA for parallel processing, along with Python for model training. Enhanced result visualization through OpenGL, achieving a detection accuracy of 89% and optimizing inference time by 25%.
- OCR Using Multilayer Perceptron (2024):** Developed an Optical Character Recognition (OCR) system to identify handwritten digits using a Multilayer Perceptron (MLP) neural network. Employed the MNIST dataset for training and validation, achieving a classification accuracy of 98%. Implemented the solution in C++, with OpenGL for real-time visualization of OCR outputs. Applied advanced preprocessing and regularization techniques to minimize overfitting and improve model robustness.

## Certificates

---

**Supervised Machine Learning (DeepLearning.AI) | [CERTIFICATE](#)**

September 2024

- Gained hands-on experience in building and evaluating machine learning models using Python libraries like NumPy and scikit-learn.
- Mastered the fundamentals of supervised learning, including regression, classification, and neural networks.

**Machine Learning with Python (IBM) | [CERTIFICATE](#)**

June 2024

- Developed the ability to evaluate linear, non-linear, and multiple regression models using key performance metrics.
- Gained a solid understanding of linear classification methods, including support vector machines and logistic regression.