# William Berrios

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 Github    🌐 Personal Website

## EDUCATION

**National University of Engineering**, Peru                                   Mar.14 - Dec.19
*B.S. Mechatronics Engineering (Robotics)*
Cumulative GPA: 4.0/4.0
Summa Cum Laude. Rank 1/72

**Hochschule Furtwangen University**, Germany.                           Sep.18 - Feb.19
*Faculty of Computer Science*
International exchange program.

## RESEARCH EXPERIENCE

**Artificial Intelligence Fellow - Pi School**                              May. 21 - June 21
*Translated - Rome, Italy*                                       Mentor: Sébastien Bratières

· Developed and implemented transformer models (Roberta) for email offer classification and slot filling for detecting bussiness and contact information on emails.
· Video Presentation

**Research Intern**                                                          Jan. 21 - Apr. 21
*Electronic Visualization Lab, UIC, Illinois - USA*                 Advisor: Elisabeta Marai

· Implementated different CNN models for the classification of biomedical images according to a taxomy designed by biomedical curators working with us.
· Developed a Deep Active Learning framework for efficient labeling of biomedical images of scientific articles.
· Video Presentation - Report

**Undergraduate Researcher in Robotics & AI**                               Jan 18 - Aug. 19
*Intelligent Systems Lab, Lima, Peru*                              Advisor: Alberto Coronado

· Developed a comparison of traditional and machine learning methods for evaluating the health condition of bearings presented in mechanical systems
· Implemented a prototype of an autonomous mobile robot for parking surveillance. We developed path planning algorithms in ROS and an object detection algorithm for recognizing license plates.

## INDUSTRY EXPERIENCE

**Data Science Intern**                                                        Sep 19 - Dec 20
*Pichincha Bank, Lima - Peru*

· Coordinated meetings with stakeholders for solving business problems with the analytics team.
· Proposed and implemented machine learning models for loan default prediction, credit card customer behavior and debt collection management.
· Trained 5 co-workers from the Advanced Analytics team in Python, Machine Learning and MLops.

## HONORS & AWARDS

**AWARDS** ....................................................................................................................

**Honored by the Ministry of Education - Peru**                                        2021
In recognition for outstanding participations at international machine learning competitions.

**Accepted at Machine Learning Summer school (MLSS)**                                  2021
**Accepted at 11th Lisbon Machine Learning Summer School (LxMLS)**                     2021
**Accepted as poster presenter at EEML Summer School**                                2021
· Poster Presentation

**Research Experience for Peruvian Undergraduates (REPU)** 2020
Selected to perform a remote research internship in Computer Science.
Electronic Visualization Lab from UIC, Illinois, USA

**Dean's list for Mechatronics Engineering at National University of Engineering** 2019
**Eduardo de Habich Prize** 2017
Highest honor given to undergraduates at National University of Engineering.

**Baden - Württemberg Scholarship** 2018
Awarded $7500 to study at HFU in Germany as an exchange student.

**1st place at National University of Engineering Entrance Exam** 2014
Best engineering school in Peru ($< 10\,\%$ acceptance rate).

## COMPETITIONS

**1st Place at BCI Machine Learning Competition** 2021
Rank 1/400 participants (15+ countries). Organized by BCI Bank. Awarded by $3600

**Silver Medal at Ventilator Pressure Prediction** 2021
Rank 122/2605 participants aroung the world (Top $5\,\%$). Organized by Google Brain and Kaggle.
⮺ Competition, Code.

**1st Place at WIDS Bay Area Datathon** 2021
Organized by WIDS (Standford) and Google Cloud team

**1st Place at BNP Machine Learning Competition** 2021
Rank 1/100 participants. Organized by BNP Paribas Cardiff and Domino DataLab.
⮺ Description, Code.

**2nd Place at International Interbank Datathon** 2021
Rank 2/229 participants - LATAM. Organized by Interbank - Peru. Awarded by $6000 dollars.

**1st Place at BanColombia Datathon** 2021
Rank 1/80 teams - LATAM. Organized by Group BanColombia. Awarded by $2000 dollars.

**2nd Place at Brewing Data Cup** 2020
Competition organized Ab-Inbev. Awarded by $500 dollars.

**Finalist at the ERC space and robotics competition** 2020
Part of the Robotics and AI team from KAMAYUC. Organized by European Rover Challenge.

## PROFESSIONAL ACTIVITIES

### ACADEMIC

**Organizer and Sponsorship Chair** 2021
LatinX in AI Workshop at @ ICML'21

**Moderator and Technical Support** 2021
LatinX in AI Workshop at @ CVPR'21

### COMMUNITY & SOCIAL

**Organizer and Moderator - *REPU CS Day*** 2021
Set of talks in which graduate students, postdocs and professors from UIC, Oxford, Purdue, MIT and other institutions shared their research in computer science.

**Speaker - *Pontificie Universidad Catolica del Peru*** 2021
Talked about how machine Learning competitions served as a source of Artificial Intelligence learning

**Speaker - *Universidad Nacional de Ingenieria*** 2019
Talked about my experience and suggestions as an exchange student at Furtwangen University in Germany

**Volunteer - *Asociacion Ferreycorp*** 2019
Conducted an environmental awareness workshop, dynamics for the development of soft skills and vocational talk.

**Teaching Assistant - *Cross Cultural Engagement Program with Penn State*** 2019

Training program in IoT and web applications aimed at 15 students from Penn State University. Organized by the National University of Engineering with the support of the United States Embassy.

## SELECTED PROJECTS

**Deep Active Learning Segmentation of Defaults in Steel Surfaces** Aug.21 - *In Progress*
· Evaluation of uncertainty sampling algorithms for efficient labeling of segmentation mask on steel defects images.
· Mentor: Phd. Paul Cardenas

**Automatic review of reports for the Telecommunications industry** 2021
· Implemented an OCR model for verifying the date of reports and a CNN classification model for detecting the presence of signatures.
· ⬈ Code

**Prediction of children's bone age from a Brazilian hospital** 2020
· Fine-tuned CNN architectures on X-rays images in combination with tabular features from patients.
· Deployed the final product as a web application using Flask and Heroku.
· ⬈ Code

## TECHNICAL SKILLS

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|---|---|
| **Programming:** | C++, Python, SQL, HiveQL, MATLAB, Latex |
| **Software:** | Machine Learning Frameworks (Tensorflow, PyTorch, Pytorch - Lightning), OpenCV, Git, Docker |

## RELEVANT COURSES

**Universidad Nacional de Ingenieria:** Artificial intelligence, statistics and probability, linear algebra, multivariable calculus, digital image processing, numerical methods.

**HFU University:** Deep Learning, Internet of Things

**Online courses:** Neural networks, reinforcement learning, generative models, natural language processing, AI for Medicine (Coursera).