# Rodolfo Quispe

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github.com/RQuispeC

## Education

2019-2023 **PhD in Computer Science**, *University of Campinas (UNICAMP)*, Brazil, Thesis in Computer Vision.

2017-2019 **MS in Computer Science**, *University of Campinas (UNICAMP)*, Brazil, Thesis in Computer Vision.

2012-2016 **Bachelor in Computer and Systems Engineering**, *Universidad Nacional de San Antonio Abad del Cusco (UNSAAC)*, Perú, 2nd place of all students in class for the last 3 years.

## Awards and Recognitions

- **Microsoft:** 2023, Pattent: "MLHash: De-identification designed for Machine Learning".
- **Microsoft Fall Hackathon:** 2021, Best Project Award; Most Innovative Project Runner-Up.
- **International Conference on Information and Knowledge Managment (CIKM):** 2020, Best Paper Award.
- **UNICAMP:** 2017-2023, Brazilian National Council for Scientific and Technological Development Scholarship.
- **ACM International Collegiate Programming Contest (ICPC):** 2015, 6th in all Peru; 2014, 1st in the South of Perú; 2013, top 13% participants in the South Region of Latin America.

## Languages and Technologies

- Machine/Deep Learning (ML/DL), Natural Language Processing (NLP), Information Retrieval, Computer Vision, Search Engines, Recommendation Systems, Transformers, OpenCV, Scikit-Learn, Scikit-Image, PyTorch, TensorFlow, ONNX.

## Projects and Experience

2021-Present **MICROSOFT – APPLIED SCIENTIST I & II – Health AI**.

- Led the end-to-end AI workflow for Microsoft De-Identification Service, a project that protects Protected Health Information (PHI) using NLP.
- Implemented an experimentation pipeline that is used by multiple scientists to train, test and validate various data sources, models, and features using Python, PyTorch and AzureML.
- Built and trained a state-of-the-art large language model (LLM) based on BERT and outperform by 5% in recall and 16% in precision with our closest competitor on the I2B2 2016 dataset.
- Optimized and deployed the LLM to private preview for multiple clients using combination of mixed precision, ONNX runtime and custom low latency inference code, resulting in more than 30% improvement in latency.
- Developed and applied novel methods for lossless surrogation in PHI De-Identification. Reducing reduced model errors from 15% to 4% in downstream tasks.

2020-2021 **MICROSOFT – SOFTWARE ENGINEER – Shopping Team**.

- Lead incubation project including cross teams colaboration, backend development, products recommendations and NLP for receipt expansion and understanding.
- Contributed to huggingface/transformers, a major open source project for NLP and DL, by fixing MBART language token position.
- Built and deployed supervised and self-supervised natural language processing pipelines that improved revenue by 5%, click-through rate by 14%, and abandonment by 19% in Bing Shopping Vertical.

2018-2023 **UNICAMP – COMPUTER VISION FOR OBJECT REIDENTIFICATION AND TRACKING**.

- Proposed efficient distilation of multi-modal information for ReID in images. Improved SOTA rank-1 by 4.5%.
- Proposed supervision method to leverage low informative image regions in ReID representation. Improved SOTA rank-1 by 4.7%.

2018 **MICROSOFT – SOFTWARE DEVELOPMENT ENGINEER INTERN**.

- Developed NLP models for Conversational Search in Bing to narrow users intention. Improved feature coverage from 10% to 15%.

## Positions of Responsibility and Extra-Curricular Activities

2021 **Peruvian Simposium in Deep Learning**. Speaker and Mentor

2017 – 2023 Problem setter in competitive programming contest in Cusco: "Cuscontest"; Peru: "Peruvian Scholar Contest"; LATAM: "IEEE International Congress on Electronics, Electrical Engineering and Computing"