Elwin Huaman, M.Sc.

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I am currently pursuing a Ph.D. in Computer Science, it is strongly focused on knowledge graphs, their creation, curation, and deployment over under-resourced languages. I have working experience in researching, teaching, and the maintenance of knowledge graphs in the industry. Furthermore, I have published several articles and co-authored a book titled *Knowledge Graphs: Methodology, Tools and Selected Use Cases.* Moreover, I have participated and been awarded in a conference, hackathon, and datathon. Last but not least, I run several projects, programs, workshops, presentations, and talks related to knowledge management, minority communities, under-resourced and endangered languages, and media and information literacy.

Education

2019 – · · · · Ph.D. in Computer Science (Ongoing). University of Innsbruck, Austria
Topic: Knowledge Graph Quality Assessment

I research semantic web technologies that can be used for assessing the quality of knowledge graphs, e.g., data modelling, ontologies, knowledge representation, and knowledge curation.

2015 – 2017 M.Sc. in Web Engineering. University of Oviedo, Spain

I specialized in developing web technologies using programming languages like PHP, Python, Java, Html, JavaScript. I work on UI design. Also, I did research on semantic web, linked data, linked open data, RDF, OWL, ontologies, dictionaries, web accessibility, and project management.

2013 – 2014 M.Sc. in Digital Information Systems. University of Salamanca, Spain

I focused on indexing and retrieval systems for digital information, content management and network analysis in digital environments, description, representation, diffusion, consumption, preservation, and organization of printed and digital resources, e.g., books, collections, etc.

2008 – 2012 B.Sc. in Sv

B.Sc. in Systems Engineering. National University of Altiplano - Puno, **Peru** My interests were focused on implementing and optimizing complex systems, databases management, and content management systems (CMS). e.g., I developed a web system for managing students and teachers data of the National University of the Altiplano of Puno.

Employment History

2023 – · · · · Project Manager, Reading Wikipedia in the Classroom, WikiAndes, Remote.

Management of the Reading Wikipedia in the Classroom program in Peru, monitoring its

progress, and evaluation of its results. Also, bringing Wiki Projects to the Andes.

Assistant Facilitator, Wikimedia Education, Wikimedia Foundation, Remote.

Support in the management, monitoring, and evaluation of the Training of Trainers for Reading Wikipedia in the Classroom program, as well as ensuring that participants have a smooth

learning experience through the program.

2021 – 2022 Lecturer, Advance Topics in Computer Science, Innsbruck University, Austria.

In this practical lesson, students learned and applied their programming and research skill to dive into groundbreaking topics and technologies in computer science, e.g. Knowledge graphs.

2020 – 2021 Lecturer, Online Communication and Marketing, University of Innsbruck, Austria.

It was focused on learning semantic web technologies, and apply them to online services, e.g., students set up a website, add semantic annotations, and create e-commerce knowledge bases.

2019 – 2022 **Teaching Assistant,** Programming Methodology, University of Innsbruck, **Austria**.

In this pro-seminar, students complement their knowledge of Java programming language.

Moreover, students are evaluated weekly, e.g., through presentations, homework, and quizzes.

Employment History (continued)

- 2018 2022 **Researcher,** Semantic Technology Institute (STI), University of Innsbruck, **Austria**.

 During this period, I participated in several projects (e.g. MindLab, WordLiftNG), coauthored a book (e.g., Knowledge Graphs), and published several articles (see Google Scholar).
- Business Development Consultant. Crnomelj Information Center, Slovenia.

 Task: Planning, organizing and implementing activities to promote and develop tourism and business in the Bela Krajina region. In addition, running technology workshops.
- 2015 2017 Lecturer. Research Center of the National University of Altiplano, Puno, Peru.

 Task: Training teachers in research areas, and use of technologies such as Mendeley (Bibliographic References Manager), SigmaPlot (Data analysis), and DSpace (Repository of data).

Miscellaneous Experience

Selected Projects

- Coordinator, WikiAndes: It aims to bring Wiki projects to the Andes. It helps teachers and students in the Andes (e.g. Peru) achieve their learning objectives, for instance, developing media and information literate citizens. See: https://bit.ly/WikiAndes
- 2022 · · · · Coordinator, Qichwabase: It is the Quechua language Knowledge Graph project.

 Brings together researchers and Quechua language enthusiasts with the aim of preserving Quechua knowledge, and developing technology for Quechua communities.
- Instructor, Science Clubs in Quechua: We develop in a collaborative and multidisciplinary way the use of the Quechua language for the dissemination of different areas of scientific knowledge. See more: http://clubesdecienciaperu.org/project/cdec54/
- Documentary, Wikipedia Die Schwarmoffensive: It explains the possibilities and limits of Wikipedia through conversations with Wikipedia activists, and those who are critical of it. See: https://www.dw.com/de/wikipedia-die-schwarmoffensive/av-61988535
 - **Researcher**, WordLift NG project: Develops a new platform to deliver Agentive SEO technology to any website. See more: https://wordlift.io/ng/
- Founder, QUIPU [Quechua Language-based Knowledge Graph]: Aims to preserve Quechua knowledge in a structured format. See: https://bit.ly/QUIPUApproach
- Researcher, MindLab project: Develops methods and software tools for modelling and implementing scalability for knowledge graphs. See more: https://mindlab.ai/

Awards, Achievements, and Grants

- Grant, University of Innsbruck for attending the AURORA Summer School on Public Outreach for selected PhD candidates, from 5 to 8 June, Iceland
 - **Scholarship**, Wikimedia Foundation for supporting technical contributor to Wikimedia projects, and allow them to attend the Wikimedia Hackathon 19–21 May, **Greece**
- Grant, North American Chapter of the Association for Computational Linguistics (NAACL) for presenting outstanding papers on the SIMBig Conference, 16-18 Nov, Peru
 - **Grant**, Wikimedia Foundation for implementing the Reading Wikipedia in the Classroom program (Bringing Wiki project to the Andes), **USA**
 - Grant, Postdocs to Innovators (p2i) for following an entrepreneurial training course in topics like launching a business, being innovative in industry and academia, France
 - **Science Slam Winner**, Preserving human knowledge through knowledge graphs by Elwin Huaman, *ScienceSlam2022*, Innsbruck, **Austria**. Read more: www.scienceslam.at

Miscellaneous Experience (continued)

- **Best Project Award**, 4th Summer Datathon on Linguistic Linked Open Data (SD-LLOD-22): Dictionary LODification using Wikibase: Quechua language, *SD-LLOD-22*, Cercedilla, **Spain**. Read more: https://datathon2022.linkeddata.es/
- **First Prize**, ICTs for Indigenous Languages Hackathon as part of the World Summit on the Information Society (WSIS 2022), *UNESCO*, **France**. https://bit.ly/WSIS-winner
- Best Paper Award, Knowledge Graphs and Semantic Web Conference (KGSWC2021): Towards Knowledge Graphs Validation through Weighted Knowledge Sources, KGSWC2021, Online, Thailand
- Finalists phase, Aporta Challenge 2019: Ideas competition, *Ministry of Economy and Business*, Spain. See more: https://bit.ly/aporta-2019
 - Grant, 1669 Reise- und Forschungsstipendien for attending Wikimania 2019, Austria
- First Prize, Smart Destinations hackathon (Hack4SD), World Tourism Organization (UNWTO), Spain . Read more: https://youtu.be/roUrLgHZtWQ
- First Prize, University Contest of Talent and Entrepreneurship (CHAMP-U), *University of Oviedo*, Spain
 - Grant, Peruvian scientists in Europe (SINAPSIS 2017), Germany

Certification

- 2023 StudioX: Creating a Course with edX Studio. Awarded by edX StudioX (edx.org)
- Reading Wikipedia in the Classroom Trainers. Awarded by Wikimedia Foundation
 - **Wikibase and Semantic MediaWiki for data-driven semantics.** Awarded by the European Commission
- 2016 Mendeley Advisor: Reference Management Software. Awarded by ELSEVIER
- Introduction to Linked Data and the Semantic Web (Online course). Awarded by the University of Southampton
- The Semantic Web: Tools for effective information publishing and extraction on the Web (Online course). Awarded by the Pontifical Catholic University of Chile
- 2013 XV Conference on Information Management: The challenge of digital content.
 Awarded by Spanish Association of Documentation and Information (SEDIC)

International Activity

Talks

- Invited speaker: *Political Crisis in Peru: A Roundtable Discussion*, at the University College London (UCL), Virtual Event, **London**. Watch: UCL website event (Click here).
- Presenter: When Quechua meets Wikibase, at The 2022 Wikimania Conference: The Festival Edition, August 11–14, Online
 - **Presenter**: Getting Quechua Closer to Final Users through Knowledge Graphs, at The 9th International Conference on Information Management and Big Data (SIMBig 2022), **Peru**
 - **Invited speaker**: *Qichwabase as a Wikibase instance*, at the Wikibase community user group (Wikibase), Virtual Event, **Germany**. Watch: https://youtu.be/3slzBnISPAk.
 - Invited speaker: Publishing Structured Quechua Knowledge (Qichwabase), at the Science Clubs in Quechua, Online, Peru
- Presenter: Knowledge Graph Curation: A Practical Framework, at the International Joint Conference on Knowledge Graphs (IJCKG2021), Virtual Event, **Thailand**

International Activity (continued)

- **Presenter**: Towards Knowledge Graphs Validation through Weighted Knowledge Sources, at the Knowledge Graphs and Semantic Web (KGSWC 2021) Conference, **USA**
- **Invited speaker**: *Knowledge Graphs: Past, Present, and Future*, at the COPABISI 2021 Conference, National University of the Altiplano of Puno, **Peru**
- Invited speaker: Towards an Ecology of Knowledge, at the YACHANA 2021 event, National University of the Altiplano of Puno, **Peru**
- Invited speaker: Knowledge Graph basado en el idioma Quechua, at the COPAISI 2020 Conference, National University of the Altiplano of Puno, **Peru**
- Presenter: QUIPU: Quechua Language based Knowledge Graph, at the Wikimedia 2019 Conference, University of Stockholm, **Sweden**

Reviewer tasks

- Subreviewer: Semantics and Knowledge track, at the Web Conference (TheWebConf2022), Virtual Event, France
- 2021 Subreviewer, at the Knowledge Graphs and Semantic Web (KGSWC2021) Conference, USA
- Subreviewer, at the 12th International Conference on Knowledge Science, Engineering and Management (KSEM2019), Greece
 - **Subreviewer**, at the 12th International A.P. Ershov Informatics Conference (PSI2019), **Russia**

Collaborative events

- Organizer: Wikipedia as a tool for students' collaborative learning in the classroom, at the UGEL Melgar (Melgar Local Educational Management Unit). Online, **Peru**
 - Organizer: Reading Wikipedia in the Classroom, at the National University of the Altiplano of Puno, Peru
- 2022 📕 **Organizer**: *Quechua Wikipedia Editathon*, at the Science Clubs in Quechua, Online, **Peru**
- 2021 Roganizer: Quechua Wikipidiya Editathon, the Endangered Languages Project, Online, USA
 - Organizer: Workshop on Digital Publishing in Quechua Language, at the Science Clubs in Quechua, Online, Peru

Languages

English Professional working proficiency

Spanish Native or bilingual proficiency

Quechua Native or bilingual proficiency

Italian Limited working proficiency

German | Elementary proficiency

Skills

Coding | Java, Python, PHP, LTEX

Databases Mysql, Graphdb, Wikibase, SPARQL.

Web Dev | HTML, CSS, JavaScript.

Misc. Academic research, teaching, training, consultation.

Research Publications

Books and Chapters

Fensel, D., Simsek, U., Angele, K., **Huaman**, E., Kärle, E., Panasiuk, O., ... Wahler, A. (2020). *Knowledge graphs - methodology, tools and selected use cases.* 6 doi:10.1007/978-3-030-37439-6

Conference Proceedings

- Huaman, E., & Fensel, D. (2021). Knowledge graph curation: A practical framework. In *Ijckg'21: The 10th international joint conference on knowledge graphs, virtual event, thailand, december 6 8, 2021* (pp. 166–171). 6 doi:10.1145/3502223.3502247
- Huaman, E., Tauqeer, A., & Fensel, A. (2021). Towards knowledge graphs validation through weighted knowledge sources. In Knowledge graphs and semantic web third iberoamerican conference and second indo-american conference, KGSWC 2021, kingsville, texas, usa, november 22-24, 2021, proceedings (Vol. 1459, pp. 47–60). Odoi:10.1007/978-3-030-91305-2_4

Journal Articles

- Simsek, U., Kärle, E., Angele, K., **Huaman**, **E.**, Opdenplatz, J., Sommer, D., ... Fensel, D. (2023). A knowledge graph perspective on knowledge engineering. *SN Computer Science*, 4(1), 16. 6 doi:10.1007/s42979-022-01429-x
- Aghaei, S., Angele, K., **Huaman**, E., Bushati, G., Schiestl, M., & Fensel, A. (2022). Interactive search on the web: The story so far. *Information*, 13(7), 324. Ø doi:10.3390/info13070324
- **Huaman**, E., Huaman, J. L., & Huaman, W. (2022). Getting quechua closer to final users through knowledge graphs. CoRR, abs/2208.12608. Odoi:10.48550/arXiv.2208.12608. arXiv: 2208.12608
- Angele, K., Fensel, D., **Huaman**, E., Kärle, E., Panasiuk, O., Şimşek, U., ... Wahler, A. (2020). Semantic web empowered e-tourism. *Handbook of e-Tourism*, 1–46.
- **Huaman**, E., Kärle, E., & Fensel, D. (2020a). Duplication detection in knowledge graphs: Literature and tools. *CoRR*, *abs*/2004.08257. arXiv: 2004.08257. Retrieved from *𝚱* https://arxiv.org/abs/2004.08257
- **Huaman**, E., Kärle, E., & Fensel, D. (2020b). Knowledge graph validation. *CoRR*, *abs/2005.01389*. arXiv: 2005.01389. Retrieved from *ℜ* https://arxiv.org/abs/2005.01389