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, workshops, and presentations related to under-resourced, and endangered languages.

Employment History

2022 — **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.

2018 – 2022 — **Researcher,** Semantic Technology Institute (STI), University of Innsbruck, **Austria**.
During this period, I participated in several projects (e.g. MindLab, WordLiftNG), co-authored a book (e.g., Knowledge Graphs), and published several articles (see Google Scholar).

2017 – 2018 — **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.*

2016 – 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).*

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, RDF, OWL, ontologies, dictionaries, Linked open data.

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 digital content.

Education (continued)

2008 – 2012   🔖 **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., A platform for managing students and teachers data of the University of Altiplano.

Languages

English   🔖 Professional working proficiency

Spanish   🔖 Native or bilingual proficiency

Quechua   🔖 Native or bilingual proficiency

Italian   🔖 Limited working proficiency

German   🔖 Elementary proficiency

Research Publications

Books and Chapters

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

Conference Proceedings

1. 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). 🔗 doi:10.1145/3502223.3502247

2. 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). 🔗 doi:10.1007/978-3-030-91305-2_4

Journal Articles

1. 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. 🔗 doi:10.1007/s42979-022-01429-x

2. 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. 🔗 doi:10.3390/info13070324

3. Huaman, E. (2022). Steps to knowledge graphs quality assessment. *CoRR*, *abs/2208.07779*. 🔗 doi:10.48550/arXiv.2208.07779. arXiv: 2208.07779

4. Huaman, E., Huaman, J. L., & Huaman, W. (2022). Getting quechua closer to final users through knowledge graphs. *CoRR*, *abs/2208.12608*. 🔗 doi:10.48550/arXiv.2208.12608. arXiv: 2208.12608

5. 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.

6. Huaman, E., Kärle, E., & Fensel, D. (2020a). Duplication detection in knowledge graphs: Literature and tools. *CoRR*, *abs/2004.08257*. arXiv: 2004.08257. Retrieved from 🔗 https://arxiv.org/abs/2004.08257

7. Huaman, E., Kärle, E., & Fensel, D. (2020b). Knowledge graph validation. *CoRR*, *abs/2005.01389*. arXiv: 2005.01389. Retrieved from 🔗 https://arxiv.org/abs/2005.01389

Skills

Coding	🔖	Java, PHP, Python, LaTeX, …
Databases	🔖	Mysql, Graphdb, SPARQL.
Web Dev	🔖	Html, css, JavaScript.
Misc.	🔖	Academic research, teaching, training, consultation.

Miscellaneous Experience

Selected Projects

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.

2021 – 2022 🔖 **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/`

2020 – 2021 🔖 **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/`

2019 – · · · · 🔖 **Founder**, QUIPU [Quechua Language-based Knowledge Graph]: Aims to preserve Quechua knowledge in a structured format. See: `https://bit.ly/QUIPUApproach`

2019 – 2020 🔖 **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

2022 🔖 **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

🔖 **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`

2021 🔖 **Best Paper Award**, Knowledge Graphs and Semantic Web Conference (KGSWC2021): Towards Knowledge Graphs Validation through Weighted Knowledge Sources, *KGSWC2021*, Online, **Thailand**

2019 🔖 **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**

2018 🔖 **First Prize**, Smart Destinations hackathon (Hack4SD), *World Tourism Organization (UNWTO)*, **Spain**

2017 🔖 **First Prize**, University Contest of Talent and Entrepreneurship (CHAMP-U), *University of Oviedo*, **Spain**

Miscellaneous Experience (continued)

🔖 **Grant**, Peruvian scientists in Europe (SINAPSIS 2017), **Germany**

Certification

2023 🔖 **StudioX: Creating a Course with edX Studio**. Awarded by edX StudioX (edx.org)

2022 🔖 **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**. Awarded by ELSEVIER

International Activity

Talks

2022 🔖 **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**

2021 🔖 **Presenter**: *Knowledge Graph Curation: A Practical Framework*, at the International Joint Conference on Knowledge Graphs (IJCKG2021), Virtual Event, **Thailand**

🔖 **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 Altiplano, **Peru**

🔖 **Invited speaker**: *Towards an Ecology of Knowledge*, at the YACHANA 2021 event, National University of Altiplano, **Peru**

2020 🔖 **Invited speaker**: *Knowledge Graph basado en el idioma Quechua*, at the COPAISI 2020 Conference, National University of Altiplano, **Peru**

2019 🔖 **Presenter**: *QUIPU: Quechua Language based Knowledge Graph*, at the Wikimedia 2019 Conference, University of Stockholm, **Sweden**

Reviewer tasks

2022 🔖 **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**

2019 🔖 **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

2022 🔖 **Organizer**: *Quechua Wikipedia Editathon*, at the Science Clubs in Quechua, Online, **Peru**

2021 🔖 **Organizer**: *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**