Elwin Huaman, M.Sc.

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I am currently working as a research assistant and pursuing a Ph.D. in Computer Science, both are strongly focused on knowledge graphs, their creation, curation, and deployment. I have working experience in researching, teaching, and the maintenance of knowledge graphs in the industry. I have published several articles and co-authored a book. Furthermore, 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

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.

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.

Teacher 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), 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.

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

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.

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.

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.

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

Fensel, D., Simsek, U., Angele, K., Huaman, E., Kärle, E., Panasiuk, O., ... Wahler, A. (2020). Knowledge graphs - methodology, tools and selected use cases. Ø 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).

 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

- 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. (2022). Steps to knowledge graphs quality assessment. CoRR, abs/2208.07779. doi:10.48550/arXiv.2208.07779. arXiv: 2208.07779
- Huaman, E., Huaman, J. L., & Huaman, W. (2022). Getting quechua closer to final users through knowledge graphs. CoRR, abs/2208.12608. 6 doi:10.48550/arXiv.2208.12608. arXiv: 2208.12608
- 4 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 *Ohttps://arxiv.org/abs/2004.08257*
- Huaman, E., Kärle, E., & Fensel, D. (2020b). Knowledge graph validation. *CoRR*, *abs/2005.01389*. arXiv: 2005.01389. Retrieved from **6** https://arxiv.org/abs/2005.01389

Skills

Coding 📕 Java, PHP, Python, 🖫 KX, ...

Databases 📕 Mysql, Graphdв, SPARQL.

Web Dev 📕 Нтмг, 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.
- 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 and Achievements

- 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
- First Prize, University Contest of Talent and Entrepreneurship (CHAMP-U), University of Oviedo, Spain
 - Grant, Peruvian scientists in Europe (SINAPSIS 2017), Germany

Certification

- 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

- 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**
 - 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
- Invited speaker: Knowledge Graph basado en el idioma Quechua, at the COPAISI 2020 Conference, National University of Altiplano, **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
- 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: Workshop on Digital Publishing in Quechua Language, at the Science Clubs in Quechua, Online, Peru