JUAN-FRANCISCO REYES

NLP Engineer, Computational Linguist, Data Scientist

Ph.D. Candidate. I create NLP models using LLMs to facilitate understanding between humans and machines. Worked in international multidisciplinary research and industry projects. Interested in the interpretation of NLP models (XAI) at the linguistic level, computational linguistics, and information extraction. Seasoned full-stack web developer. Previously, UX champion in projects across multiple industries such as education, journalism, banking, startups, etc., with team building experience. Possessing strong innovative skills, and scientific, creative, and analytical thinking.

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############### ##, ##### Cottbus, Deutschland

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Peruvian + Spanish nationality

github.com/pacoreyes

linkedin.com/in/juanfranciscoreyes

researchgate.net/profile/Juan-Francisco-Reyes

huggingface.co/pacoreyes

pacoreyes.de (pictures, portfolio, blog, extended CV)

AREAS OF EXPERTISE

NLP, Computational Linguistics, Data Science, Information Extraction, Deep Learning, ML, LLMs, Statistical Analysis, Python, PyTorch, spaCy, SHAP, Transformer Interpret, Hugging Face, Explainable AI, LangChain, Google Cloud, AWS, Knowledge Graph, Neo4j, Docker, Web Development, OOP, JavaScript, UX, Interaction Design, Usability, SQL, NoSQL, Flask, API, Qualitative Research, Team Building, Project Management.

PROFESSIONAL EXPERIENCE

Akademischer Mitarbeiter, Brandenburgische Technische Universität, Cottbus — Germany

April 2020 — March 2024

Research assistant and lecturer at the *Department of Internet Technology in the Institute for Computer Science. Faculty 1, MINT - Mathematics, Computer Science, Physics, Electrical Engineering and Information Technology*.

Teaching:

- *NLP for Information Extraction*: Delivered lectures and practical sessions on NLP tools for information extraction, computational linguistics, model and dataset development, and knowledge graph population. https://ie-seminar.web.app

- *Web Technologies Lab*: guiding students to develop free projects combining NLP and web technologies to crawl web resources and extract information from massive amounts of data.

- *Specification Languages and Processing Techniques for Web Documents:* Covered fundamentals and modern techniques in HTML, XML, CSS, including SEO, web accessibility, web performance, and others.

- *Designing and Implementing Web Applications*: Educated students in object-oriented programming using JavaScript, Node.js, Python, and Google Firebase.

Achievements:

- Co-authored the book "*Learn how to Build Web Apps with JS and Cloud Firebase*", focusing on OOP development using serverless web technologies and the NoSQL Firestore. https://webengineering.netlify.app/js-firebase

- Advised 2 Master's thesis in Natural Language Processing and Information Extraction.

- Given for the first time the course *NLP for Information Extraction*, which increasingly attracted students from different programs, including the Master's programs in Artificial Intelligence and Cybersecurity.

Founder and Director, Talámica Øptimization (UX Design/Research Agency), Lima — Peru

November 2014 — February 2020

Directed a *user experience design consulting firm* specializing in the development and implementation of UX design strategies for websites and mobile applications across diverse industries, including media, finance, banking, e-commerce, education, and startups.

- Led and mentored a team of UX designers and researchers.

- Directed the entire UX design process, from user research (surveys, usability testing, interviews, web analytics, expert reviews, heuristics evaluation, and ethnographic studies) to the ideation and implementation stages.

- Front-end web development, primarily utilizing JavaScript, HTML, and CSS to enhance user interfaces through interaction design techniques, ensuring engaging and intuitive user experiences with web technologies.
- Presented research findings and project progress to clients, communicating strategic insights and design evolution to ensure alignment and satisfaction.

User Experience Director, Wunderman Thompson (Digital Agency), Lima — Peru

August 2013 — October 2014

Established and led the first UX team of four designers at the agency, championing user experience by advocating its principles and ensuring their integration into all organizational projects and strategies.

- Played a pivotal role in client pitches, demonstrating a deep understanding of user needs, which significantly boosted client confidence and contributed to increase in annual sales.
- Guided the UX team in adopting a scientific approach to design, where decisions were driven by cognitive psychology and user research, thus fostering an evidence-based design culture.

Research Assistant and Developer, University of Baltimore, Maryland — USA

August 2011 — July 2013

Graduate Assistant at the Department of Integrated Digital Services, Langsdale Library, University of Baltimore's library.

- Developed *Langsdale on the Go!*, a serverless web application using HTML, CSS, and JavaScript, integrating multiple APIs to locate books in the library, featuring a book locator that displayed a map with the exact shelf where a resource was located.
- Designed the interaction experience using core web design principles and validated using research methods such as usability testing, interviews, and observation.

EDUCATION

Ph.D. Candidate in Computer Science applied to NLP and Computational Linguistics

Brandenburgische Technische Universität (BTU), Cottbus — Deutschland

2024

- Thesis: *Explaining Large Language Models for Passage-Level Political Statement Extraction Using Linguistic Rule-Based Models* (supervised by Professor Gerd Wagner). The thesis compiles three articles that uses XAI tools and methods to interpret NLP models, all of them are been published in peer-reviewed journals.
- 3 models and 3 datasets: *Speeches and Interviews Classification* (BERT), *Stance Classification* (SetFit), and *Topic Continuity Detection* (BERT).

M.Sc. Interaction Design and Information Architecture, with focus on User Research

University of Baltimore (UB), Maryland — U.S.A.

2016

- Thesis: *Effect of Emotion on Marketing Landing Page Conversion* (supervised by Professor Kathryn Summers).

B.Sc. Social Communications, Major in Audiovisual Communication

Universidad Nacional Mayor de San Marcos (UNMSM), Lima — Peru

2006

AWARDS AND GRANTS

- First in class of 23 students graduating, undergraduate studies at UNMSM, Valedictorian, (2006).
- *EducationUSA Opportunity Grants* (Fulbright Peru), awarded financial aid for application process to graduate studies, (2007).
- Graduate Assistant at Langsdale Library at University of Baltimore, full scholarship for Master's studies, (2011).
- Turner Research and Travel Award from University of Baltimore (2012).

LANGUAGES

English (full professional proficiency), Spanish (native), German (elementary proficiency; currently studying).