# SUMMARY CURRICULUM VITAE

## Guillem Bonilla Montolio

## Data Analyst

## Personal Details

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| Full Name | Guillem Bonilla Montolio |
| Nationality | Spanish |
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## Qualifications

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| 2021 | MSc in Statistics and Operations Research, Polytechnic University of Catalonia (UPC) |
| 2018 | BSc in Industrial Electronics and Automatic control Engineering, Polytechnic University of Catalonia (UPC) |

## Professional Experience

Guillem Bonilla is focused on the use of his analytical, statistical, and programming skills to collect, analyse, and interpret large data sets. He then uses this information to develop data-driven solutions to difficult business challenges. Guillem has a wide range of technical competencies including statistics (Bayesian and Frequentist), coding languages (fluent in R and Python), databases (fluent in SQL and NoSQL), machine learning and statistical modelling, and reporting technologies. His recent work has included (i) developing machine learning algorithms for voice recognition software in a project to diagnose COVID-19 through audio cough samples for UPC (Polytechnic University of Catalonia), in collaboration with the Hospital de Sant Joan de Déu in Barcelona, and (ii) using Bayesian hierarchical models to identify traces of heavy metals in water in the Barcelona Aquarium, in a project funded by University of Barcelona. Guillem has collaborated on two TCE M&E projects as a Data Scientist. He has applied cutting-edge natural language processing techniques, such as text mining, sentiment analysis and topic modelling, to analyse Telegram and WhatsApp interactions in large groups. In addition, he has produced comprehensive data extraction/analysis with R and created complex SQL queries for a British Council project focused on reducing education exclusion during the COVID-19 lockdown in vulnerable communities in Southern African.

## Selected Projects

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| 2020 – 2021 | Learn English by WhatsApp (British Council, Southern Africa) | Funded jointly with the FCDO, the British Council's Learn English by WhatsApp programme aims to support the remote delivery of English language teaching and learning during Covid-19 through a WhatsApp API/chatbot called Turn. TCE (with support from the University of Wolverhampton, UK) carried out a **summative evaluation** of the programme in five countries in Southern Africa (Botswana, Lesotho, Namibia, South Africa & Zimbabwe), with a particular focus on examining the impact on digitally excluded and/or disadvantaged learners from vulnerable populations. |
| | Role | M&E Data Scientist with responsibility for: data extraction from a complex API (see process here), data analysis and reporting. Data analysis required the creation of 40+ complex SQL queries with BigQuery, and the creation of 10+ scripts in R. In addition, a Python script was created to analyse and report on the results of Facebook Ads acquisition campaigns by correlating large datasets from Facebook with Turn, as requested by the British Council South Africa. |
| | Outputs | Data reporting in graphic format included: tables, bar charts and pie charts; trend maps with multiple overlays; and heat maps (see heat map examples here). |
| | Evaluation beneficiaries | 22,700+ learners in five countries in Southern Africa who use the Turn API to learn English with WhatsApp; thousands of these learners are in digitally excluded or disadvantaged circumstances. |
| 2019 – 2021 | English Connects (British Council, Sub Saharan Africa) | Funded by the FCO and managed by the British Council, the English Connects programme aims to connect the UK to young people and future leaders in francophone Africa through English; to improve the employability, resilience and networks of young people; and to support senior policy makers in this endeavour. TCE carried out **summative evaluations** of the multi-strand English Connects programme in 12 countries in Sub Saharan Africa (SSA) for two programme phases (2019-2020; 2020-2021). |
| | Role | M&E Data Scientist with responsibility for:<br><br>(i) data analysis and reporting on interactions in a large Telegram teacher development group / community of practice with 480 members from 12 SSA countries;<br>(ii) data analysis and reporting on interactions in 50+ WhatsApp teacher trainer and teacher groups in 12 SSA countries, with over 5,000 members in total; and<br>(iii) data analysis and reporting on interactions in 2 language learning WhatsApp groups with 339 members in 12 SSA countries. |

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| | Data analysis required Natural Language processing with R to carry out text mining, sentiment analysis, and topic modelling). This enabled interactions to be analysed at scale, and conclusions to be drawn about how the Telegram and WhatsApp groups were actually used, backed up by statistical probability. |
| Outputs | Five data points were analysed with R scripts: participation metrics, word frequencies, usage, sentiment analysis and contextual sentiment analysis. Findings were reported in graphic format (e.g. bar and pie charts; word maps for sentiment analysis), and included in the final evaluation reports for each of the 12 SSA countries, with aggregated findings included in the Regional report. |
| Evaluation beneficiaries | Telegram and WhatsApp groups members: 5,000+ English language teachers and trainers; 300+ English language learners. |