Curriculum Vitae

Personal Information

Name   ANTONIO RUNGO
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Education

2013 Master of Statistics: Biostatistics, Hasselt University, Belgium.

2009 Bachelor in Statistics, Eduardo Mondlane University, Maputo, Mozambique

Technical Skills

- ♦ **Analytical Programs:** R, RStudio, RMarkdown, Python for Data Science, Jupyter notebook, Tableau, SQL, Git, Github, Learning PostgreSQL, SAS, SPSS, Open Data Kit (ODK), EpiData, EpiInfo, LateX**.**
- ♦ **Real world experience with:** Exploratory Data Analysis, Data Visualization with Plotly and Python, Regression, Classification, Cluster Analysis, Segmentation, Learning Natural Language Processing.

Dynamic Visualizations skills

Web viz: Developed dynamic data visualizations on different projects:
- https://anrungo.github.io/cipEleicoes2019/index.html
- https://anrungo.github.io/epts_dqa_sapr2018/
- https://anrungo.github.io/MozElections2019/index.html

RPubs: https://rpubs.com/arungo
Tableau: https://public.tableau.com/profile/antonio.rungo#!/
Plotly: https://plot.ly/~rungo#/

Certified Courses

- Building Interactive Dashboards with Tableau on Udemy:
  https://www.udemy.com/certificate/UC-BOETYSMZ/
- Tableau 10 Advanced Training: Master Tableau in Data Science on Udemy:
  https://www.udemy.com/certificate/UC-8ME6X16V/
- Tableau 10 A-Z: Hands-On Tableau Training For Data Science on Udemy:
  https://www.udemy.com/certificate/UC-Z60RDR1L/
- Tableau for Beginners: Get QA Certified, Grow Your Career on Udemy:
  https://www.udemy.com/certificate/UC-BRX7X5N5/
- Tableau Tutorial for Beginners on Udemy:
  https://www.udemy.com/certificate/UC-PTCYE1GO/
- Machine Learning A-Z™: Hands-On Python & R in Data Science on Udemy:
  https://www.udemy.com/certificate/UC-QIXGKEEG/
- Complete Python Bootcamp: Go from zero to hero in Python 3 on Udemy:
  https://www.udemy.com/certificate/UC-7T4T7LAH/
- Python for Data Science and Machine Learning Bootcamp on Udemy:
  https://www.udemy.com/certificate/UC-75ZV1VXU/
- Learning Data Visualization with Plotly and Python on Udemy:
  https://www.udemy.com/certificate/UC-O86LPTDR/
- Natural Language Processing (NLP) using Python on Analytics Vidhya:
  https://trainings.analyticsvidhya.com/certificates/f8b4f4b95b7e414892b9f3e2a94342d4
- Spark and Python for Big Data with PySpark on Udemy:
  https://udemy-certificate.s3.amazonaws.com/pdf/UC-QMO51AXC.pdf
- Learn SSRS Reporting using SSRS on Udemy:
  https://www.udemy.com/certificate/UC-YCRVX25D/
- Microsoft SQL Server Reporting Services (SSRS) on Udemy:
  https://www.udemy.com/certificate/UC-1TOP7PIL/
- Advanced Databases and SQL Querying on Udemy:
  https://www.udemy.com/certificate/UC-QLA51ON6/
- Introduction to Databases and SQL Querying on Udemy:
  https://www.udemy.com/certificate/UC-IMPY8HH7/
- Learn ETL using SSIS on Udemy: https://www.udemy.com/certificate/UC-C9VA27L8/
- The Complete Python & PostgreSQL Developer Course on Udemy:
  https://www.udemy.com/certificate/UC-88BLGVFX/
- Data Science in Stratified Healthcare and Precision Medicine by The University of Edinburgh on Coursera: https://www.coursera.org/account/accomplishments/verify/CUP2YJP229AB
- Reproducible Templates for Analysis and Dissemination by Emory University on Coursera*:*
  https://www.coursera.org/account/accomplishments/verify/JRR97YTC2M3W

- ♦ Applied Machine Learning for Healthcare on Udemy:
  https://udemy-certificate.s3.amazonaws.com/pdf/UC-K5HUUY1W.pdf
- ♦ Python for Data Science by AnalyticsVidhya
- ♦ Learning Microsoft SQL Server Reporting Services (SSRS) on *Udemy*
- ♦ Learning Building Interactive Dashboards with Tableau on *Udemy*

Experience

June 2019 - present: Senior Strategic Information Advisor at mothers2mothers - Maputo, Mozambique

- Designed, managed and oversee the implementation of M&E for m2m's Mozambique Programme through thought leadership, system development, and Quality Assurance

    a. Developed the m2m Mozambique Programme M&E System inclusive of, but not limited to a results framework, indicator list (including operational definitions), a Data Flow Diagram, reporting schedule and reporting templates, routine M&E Tools, a Data Management System, as well as Data Quality Audit tools and processes.

    b. Documented the m2m Mozambique Programme Routine M&E system, including Standard Operating Procedures, System Guidelines, Data Flow, Reporting Schedule, as well as Roles and Responsibilities.

    c. Managed the implementation of the m2m Mozambique Programme M&E system, including developing an m2m Mozambique Programme M&E Work Plan.

    d. Provided Quality Assurance on all M&E processes and outputs.

        i. Design, manage and implement M&E special projects to improve data collection, data quality, data management, and data use.

2. In close collaboration with local stakeholders in Government (National and Provincial) as well as Donors and NGO Implementation Partners, lead the development and execution of a country-assessment process and tools to identify strengths and address weaknesses in the M&E System of the MPM Programme in Mozambique.

With local stakeholders and M&E counterparts:

    a. Identified strengths and weaknesses in the M&E system of the MPM Programme in Mozambique
    b. Make recommendations for improvements
    c. Designed M&E system improvements
    d. Managed the implementation of the M&E Systems Improvements

e. Provided ongoing Technical Assistance and Quality Assurance of the MPM Programme in Mozambique

3. Lead the training of in-country Government staff and MPM Implementing Partners to administer and use the new or revised routine MPM M&E tools and systems

a. Contributed to the development and implementation of a national and provincial training plan as it pertains to M&E specifically.
b. Oversee the development of training materials (e.g. manuals, PowerPoint slides, Job Aids, etc.) across the entire MPM Routine M&E system.
c. Oversee training (among Government staff and MPM Implementing Partners) in administering all components of the MPM Routine M&E system in Mozambique.

4. Manage and oversee all routine and ad-hoc reporting on m2m's Mozambique Programme:

a. Routinely process all requests for M&E data, such as data / information for annual reports and proposals, meetings and public relations / communications.
b. Conducted data analysis and compile reports, as required for key donors and for all other audiences requiring data / information.
c. Ensured high quality reports are submitted in a timely manner.
d. Monitored quarterly programme achievements and trends through producing routine quarterly reports or in accordance with any agreed upon routine reporting schedule.

5. In collaboration with the M&E Advisor at m2m Head Office, ensure that high quality data are consistently generated across all components of the m2m Mozambique Programme

a. Designed Data Quality Audit systems and protocols, including Data Quality Assessment tools and procedures.
b. Performed field visits to ensure the quality of data.
c. Trained local users in the administration of the routine Data Quality Audit system.
d. Conducted monthly data quality reviews and provide systematic feedback to country stakeholders to ensure that standards of the highest data quality are maintained.

6. Other duties in support of the m2m Mozambique Programme's Strategic Information needs:

a. Liaise with Evaluation and Operations Research (E&OR) staff at Head Office and in Mozambique around E&OR priorities and design.
b. Managed data extraction, data collection and data quality improvement interventions in support E&OR projects.

December 2018 - May2019: Independent Consultant

December 2016 – November 2018: M&E advisor at Global Programs for Research and Training – UCSF Mozambique

- ♦ Contributed to the identification and monitoring of relevant M&E indicators as well as the development of work plans, M&E plan and protocols;
- ♦ Developed, adapted and / or examined the Monitoring and Evaluation tools;
- ♦ Supported internal Data Quality Assessment (iDQA) by Implementing Partners (IPs);
  - o Developed SOPs and protocol for expanded set of MER indicators
  - o Led National and Regional workshops;
  - o Analyzed the national iDQA datasets
  - o Conceptualized and developed M&E programmatic technical reports
  - o Provided Technical Assistance (TA) to IPs to scale up Data Quality Improvement (DQI) via monthly TA calls
  - o Analyzed ePTS (electronic Patient Tracking System) DQA data submitted by IP's
- ♦ Provided Technical Assistance to transition iDQA to MISAU
  - o Updated of iDQA manual to include MER indicators and DHIS2 instructions
  - o Updated of DHIS2 module for iDQA data submission and visualization
  - o Developed DHIS2 standard and graphics to be included into the platform
  - o Submitted iDQA data to MISAU via brief reports
- ♦ Collaborated with IT teams to develop tools to support routine monitoring of programs;
- ♦ Developed the CQI (Continuous Quality Improvement) dashboard and support of CQI data use
  - o Developed an online CQI HIV Care and Treatment dashboard to display CQI indicators
  - o Implemented QI (Quality Improvement) site visit approach to support data collection via tablet-based tools and dashboard use
  - o Assessed CQI tablet-based tool and dashboard use which enables more real-time, data-driven approaches to data quality management
  - o Participated in QI Technical Working Group at MISAU with HIV Program
- ♦ Provided Technical Assistance (TA) to advance national routine data quality assessment and improvement efforts
  - o Developed requirement documents for DQA module (EPLC) to be submitted to MISAU
  - o Developed iDQA transition plan to be submitted to MISAU, including SOP for access and maintenance of DQA module
  - o Conducted iDQA trainings (TOT) to build capacity in data and action plan analysis and monitoring for MISAU
  - o Conducted data management, cleaning, and analysis for every round of iDQA datasets
  - o Conceptualized iDQA technical reports to submit to CDC and MISAU

o   Developed the DQA ePTS proposal, including requirements document, of electronic module revised and submitted to CDC

o   Updated the ePTS DQA SOP and submit to CDC

o   Provided quarterly TA call/meetings to implementing partners for routine DQA implementation and document via TA log

o   Conducted data management and analysis for ePTS DQA and share the database with CDC

o   Conceptualized reports on ePTS DQA results and submit to CDC for review and approval

♦ Conceptualized and developed M&E programmatic reports to be included in real-time dynamic dashboards (potential areas: PMTCT, CQI, QI and DQA);

♦ Supported provincial health authorities to conduct internal DQA at the health facility for continuous improvement in the quality of HIV service delivery, data use and decision making among others;

♦ Developed a training curriculum and support materials;

♦ Managed and conducted in-depth M&E database analyzes using statistical software.

June 2015 – December 2016: Voluntary Medical Male Circumcision (VMMC) Project Manager and Data Analyst at International Training and Education Center for Health (I-TECH) Mozambique Office, University of Washington.

♦ Performed in coordination with MOH, external quality assurance (EQA) visits to priority VMMC sites and develop action plans for each site;

♦ Provided direct support for Data Management at National VMMC Program on M&E system;

♦ Provided TA to National VMMC Program to collect, store, analyze and report routine and EQA data from all sites;

♦ Provided TA in the development and monitoring of provincial and district Demand Creation (DC) work plans;

♦ Performed data analysis in different projects;

♦ Conceptualized statistical reports.

April 2014 – May 2015: Senior Database Manager and Data Analyst at I-TECH Mozambique Office, University of Washington.

♦ Led the process of revision of data collection tools;

♦ Developed forms on mobile data collection, questionnaire scripting, training and implementation of the e-data collection;

♦ Managed data collection using tablets;

♦ Assisted in the development of standard operational procedures for data collection in all programs;

♦ Supervised a team of data collection through site visits using tablets;

- Supported staff programs in data analysis and project evaluation of operational research framework;
- Performed statistical analysis in different projects;
- With the support of the clinicians and other data users, to participate in identifying the information required for data collection;
- Coordinated with the MoH and ensure that plans for data collection, data entry and reporting are aligned with the MoH prospects;
- Managed and coordinated the evaluation and monitoring activities to assess the quality of data;
- Coordinated with the programs the process of data analysis;
- Collaborated with implementing partners;
- Provided feedback on the result of external data quality assessment;
- Developed action plans for data quality assurance activities of programs;
- Ensured proper storage of data and to perform the more complex data analysis in the various programs underway in the I-TECH;
- Conceptualized statistical reports.

Sept 2010-- Oct 2011: Database Manager at Department of Quality Improvement, I-TECH (International Training & Education Center for Health), Maputo - Mozambique.
- Developed databases for data entry;
- Supported data collection in the following programs: *Treatment of Opportunistic Infections; Mentoring ART Clinic for Adults and Pediatrics; Positive Prevention; Mothers for Mothers; Training of Teachers; Development of Curriculum for Medical Technicians, Initial Training;*
- Conducted data analysis and reports;
- Provided timely information to report in PTO, SAPR, APR through Train SMART platform;
- Developed tools for data collecting in operational research;

Oct 2009-- August 2010: Monitoring & Evaluation and Data Manager, Research Unit in Health Systems, National Institute of Health, Maputo, Mozambique

- Performed statistical analysis;
- Developed database for different study;
- Report writing.

Feb 2009-- Sept 2009: Research Assistant, Department of Marketing, PSI (Population Service International), Maputo, Mozambique

- Coordinated the field work in the study of behavior and attitudes in mosquito net use, conducted in Maputo, Inhambane and Zambezia provinces from April to June in 2009;

- Coordinated the field work in the study about the availability of condom use and water cleaning product, conducted in Maputo, Gaza, Inhambane, Sofala and Manica from June to September in 2009;
- Trained enumerators and supervisors for the field work;
- Trained supervisor on mapping and listing for sample selection in the field;
- Performed coding on electronic questionnaire using PDA (Personal Digital Assistant);
- Developed databases and supervision in data entry;
- Conducted data cleaning and data analysis of different studies;
- Report writing.

2001—2004: Clinical Officer, working on health facility at the Ministry of Health, Mozambique

- Worked as clinical officer, screening of adults and children with different diseases at Xipamanine and Maxaquene Health Center;
- Worked at Emergency Unit at General Hospital of Mavalane.

1998—2000: Trained in health as Clinical Officer from the Ministry of Health, Mozambique

Successfully achieved projects

- Implemented data management system in real time - online - using the ODK to collect routine data in health facilities where the VMMC program is running. This data is uploaded to the server, where the Ministry of Health at central, provincial and district level can access this data to different types of analysis for decision making.
- Implemented data collection tool using CommCare for External Data Quality Assessment during the quarterly assessment visits.

Consultancy:

- **Counterpart International**
  - Data analyst and reporting services on the MONITOR: Justiça Eleitoral, Paz e Democracia election monitoring and violence prevention project
    - Developed a data analysis and reporting strategy (including sample visualizations) based on the election monitoring methodology adopted by the PCBG election project, the ELMO data collection platform and ODK form submission smartphone/tablet app
    - Provided support to the Senior Elections Specialist in making recommendations for updates to the ELMO platform in accordance with data analysis and reporting requirements

- Provided support to the Senior Elections Specialist in implementation of ELMO and other data tool access protocols to ensure that data cleaning, analysis, reporting and visualization are secure and that the privacy of informants as well as data collectors is protected
- Updated, published and pre-tested all questionnaires in ELMO/ODK to be used by monitors in the campaign, election day, post-election and incident events, as well as data collection associated with dispute resolution activities
- Created report templates and data visualizations based on FAQ-type requests, for ease of use by Counterpart, MONITOR secretariat and monitor coordinators
- Reviewed, analyzed and developed visualizations of data collected during the 2019 voter registration process as contribution to reports
- Reviewed, analyzed and developed visualizations on the campaign, election day, post-election and incident events, as well as data collection associated with dispute resolution activities, on a schedule to be agreed by the Counterpart elections team and the MONITOR secretariat
- Developed and implemented a training module for monitors on data collection and forms submission;
- Developed and implemented a training module for MONITOR election monitor coordinators in the use of ELMO for preliminary data analysis, monitor supervision, and report generation
- Developed other reports and visualizations upon request by the Counterpart elections team and the MONITOR project
- Prepare a brief how-to guide on the use of data analysis tools and visualizations for similar projects based on the MONITOR experience
- Contribute to PCBG project lessons learned or other evaluative exercises
- Prepare a final project report

- **Kixiquila Research and Consultancy Services**
  - Data Analysis on Outcome Monitoring (Baseline) Survey For Emergency Food Security and Recovery Program for vulnerable People Affected by Drought in Gaza and Inhambane Provinces of Mozambique with following main indicators:
    - % of targeted households attaining Acceptable Food Consumption Score (FCS)
    - Household Hunger Scale (HHS)
    - Household Dietary Diversity Score (HDDS)
    - Prevalence of moderate or severe food insecurity in the households (FIES)
    - Reduced Coping Strategy Index (rCSI)

- **MAP Management and Governance**
  - Database Development and Data Analysis on the Second Mozambique Evaluation in the African Coupling Review Mechanism

- **ICRH-M - The International Centre for Reproductive Health in Mozambique**
  - Trained ICRH staff on statistics contents: Introduction to Statistics, Sampling and Calculation of Sample Size, Analysis and Interpretation of Data, Database Development using Epidata, Database export to different environment of analysis, SPSS use for Data Management, cleaning and analysis;
  - Trained ICRH staff for the use of digital platforms to collect data electronically using Smartphone and/or tablets;
  - Conducted data analysis and report of baseline study on "Knowledge, Attitudes, Practices and Behaviour in communities members related to family planning in Manhiça and Marracuene districts.

- **UNFPA**
  - Developed electronic questionnaire based on mobile data collection to collect data in research on Knowledge, Attitudes and Practices of Youth for Sexual and Reproductive Health and Study Program Base "Action for Girls" during the baseline and end-line in Zambezia and Nampula provinces.
  - Developed Real Time Monitoring System, a web-based application, cloud hosted which support conventional data input and output, based on mobile data collection technology such as ODK, for BIZ Generation Program "Programa de Geração BIZ" (PGB) conducted in Nampula province.
  - Developed Real Time Monitoring System, a web-based application, cloud hosted which support conventional data input and output, based on mobile data collection technology such as ODK, for KIMCHI program in Cabo Delgado. On this program, the maternal health nurses from 64 health facilities with maternity wards from 8 districts prepare and submit a weekly report of selected indicators to be monitored at district, provincial and national level.

- **SIITRI (Science Innovation Information and Communication Technology Research Institute)**
  - Conducted data analysis and conceptualized a report writing on "Women's Rights Online" in the peri-urban areas of Maputo, Mozambique.

- **Save the Children Mozambique – Project PAGE-M**
  - Conducted data cleaning, sample weights, statistical analysis and to conceptualize the report on PAGE-M project on midline study.

- **PSI (Population Services International)**
  - Provided data analysis and report writing for the End-line project on Analysis and Evaluation of needs for the Kenmare Health Program, Moma district – Nampula, 2014.
- **Kixiquila Research and Consultancy Services**
  - Developed database for data collection in households and school on Girls Education Challenges in Manica province under VSO (Voluntary Services Overseas) project;
  - Conducted training for data clerks and mentored data entry
  - Performed data cleaning, data analysis and produced report

- **CESP – Consultores em Saúde Pública**
  - Developed databases on different studies conducted by the organizations
  - Trained and mentored data clerks on data entry
  - Performed data cleaning on databases and statistical analysis and report writing.

- **LOCAT (Consulting and Services)**
  - Developed database of the survey on knowledge, attitudes and practices in relation to HIV/AIDS at HCB, SA.

Research Interests
- Machine Learning for Data Science
- Longitudinal Data Analysis
- Data Management and Data Quality

Teaching Experience

- **March 2019:** Trainer for Statistical Analysis using SPSS - "Support for Inclusive and Sustainable Development of the Zambezi Valley phase II" for the Zambezi Agency in Tete;
- **2014 – present:** Guest lecture at UEM- Faculty of Medicine in Biostatistics Subject for Master Students in Public Health;
- **2010 –** Lecture in Demography and Biostatistics at ISCISA, Maputo - Mozambique;
- **2010** – Lecture in EpiInfo Software for the Master Students in Public Health (UEM- Faculty of Medicine), Maputo - Mozambique.

Participation in studies

- o Loss rates in the placement of recent graduates of institutions of training and job satisfaction of newly placed and their supervisors (2007-2008). Technical Report, August 2011, MOH & I-TECH Mozambique.

Participation in Health's Days

- o Awarded in 3rd place as the best poster on VMMC Quality Assessment at the 15th Health's Days held by the MOH in September 2015.

Tutoring Students

- o Tutoring master students on developing protocols to be submitted and approved by the local IRB
- o Tutoring the development of database and analysis of data

Trainings and workshops attended

- ♦ Introduction in economic evaluation of health programs, coordinated by the National Institute of Health (NIH) in Mozambique and ICF Macro International;
- ♦ Training in researching Methodology, coordinated by NIH, CDC and Elizabeth Glaser Pediatric AIDS Foundation;
- ♦ Good Clinical Practice, coordinated by NIH and FioCruz from Brazil;
- ♦ Methods to estimate the size of populations at high risk for HIV infection, coordinated by CDC, NIH and ONUSIDA;
- ♦ Training in Monitoring and Evaluation organized by PSI;
- ♦ Research Ethics for Community representatives;
- ♦ Training in PDA (Personal Digital Assistant);
- ♦ Training in Mapping and Listing for selection of the sample;
- ♦ Training in Geographical position System (GPS);
- ♦ Workshop about Sampling Techniques and Survey taught by Prof. dr. Geert Molenberghs, organized by Eduardo Mondlane University and Hasselt University;
- ♦ International Hexa-Symposium on Biostatistics, Bioinformatics, and Epidemiology on November 14-15, 2013 at Hasselt University

Languages

- Portuguese - Native;
- English – Good.
- Changana – Good
- Bitonga - Good

Membership

- Membership of the Royal Statistical Society
- Young African Statisticians (YASs)

References

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Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

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António Rungo
17.01.2020