AHMED T. **HAMMAD**

LECTURER | DATA SCIENTIST | QUANTITATIVE RESEARCHER

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INTRODUCTION

Data Scientist, Lecturer and Quantitative Researcher with multi-faceted experiences and educational background in Machine Learning, Program Monitoring and Evaluation, Econometrics and Environmental data modelling. Technical skills include programming in Python, R, and SQL. Lead Data Science Instructor at Le Wagon (Singapore & Bali) and member of the Data Science roster for General Assembly (Singapore). PhD in Causal Machine Learning.

10+ years of experience in data analysis and project management. Collaborative, responsible, independent, goal-driven, curious, and passionate about discovering, teaching and sharing knowledge and experiences.

Fields of interest: Machine Learning, Econometrics, Probabilistic Modelling, Causal Machine Learning, Incremental Learning Algorithms, Program and Policy Evaluation, Environmental Analysis, and Extreme-Event Analysis.

FREELANCE EXPERIENCES

Applied Data Science Instructor / Le Wagon, Singapore & Bali (April 2022 – Current)
Teaching students how to get the best of real data in Singapore at Le Wagon intensive Data Science coding Bootcamp. Introducing them to developer's tools & workflow, basic and advanced programming concepts in Python, Relational Database, SQL, Machine Learning, Deep Learning and Decision Science.

Data Scientist / PT. Mantra Bali, Indonesia (April 2020 – April 2021)
Developed an AI system to monitor the number of trucks entering the landfill and quantify the cubic metre of waste that goes into the landfill over time.

Data Scientist / Simile, Timor-Leste (February 2020 – January 2021)
Developed an AI Platform to improve the accuracy of early warning system alerts to Timor-Leste communities to enable targeted communities to better prepare for and respond to the impacts of climate-induced natural disasters.

Data Scientist / Tripper, Indonesia (July 2019 – August 2019)
Explored the feasibility of crop yield prediction using a combination of historical data, remote sensing data, time series, and machine learning modelling to product inventory strategy, revenues, and pricing.

Data Scientist / IoFarmIT, Italy (April 2018 – August 2018)
Prototyped a Cloud Database system to enable Sensor data storage for agricultural task planning and automation with a simple user interface to provide farmers with real-time data of their field and additional information collected through open-source API.

National Data & Fieldwork Manager / Catholic University of the Sacred Heart, Milan (September 2016 – February 2018)
Academic Research - Program Evaluation of the educational project “Family St.A.R.” Responsibilities include Data Management and fieldwork management of two consecutive waves to collect more than 10,000 questionnaires in different areas of Italy.

National Fieldwork Manager / Catholic University of the Sacred Heart, Milan (January 2017 – September 2017)
Academic Research - Project “OpenTeQ”. Primary responsibilities include the Management of interviewers and the Data Management of the survey.

Project Manager / Ipsos, Milan (August 2015 – February 2016)
Member of the team for evaluating the in-market performance and effect of advertising. Primary activities include Questionnaire structure and translation checking, Management of online interviews, and Report writing.

Data & Fieldwork Manager / Catholic University of the Sacred Heart, Milan (2013 –2015)
Academic Research - Project "Family Group Conference" Main responsibilities include: Questionnaire Design, Data Management, and fieldwork management of three waves to collect 4,000+ questionnaires.

EDUCATION

Doctor of Philosophy / Catholic University of the Sacred Heart, Milan (Italy) (2018-2021)
Thesis: "Causal Machine Learning for Program and Policy Evaluation." This involved studying how Machine Learning techniques can be used to evaluate Programs and Policies in conditions where the classic econometrics models would fail".

Visiting Researcher / University of Leeds, Leeds (UK) (November 2018-April 2019)
Project: "Analysing the UK Electronic Petition System." This involved developing a web application to integrate socio-demographic characteristics on the constituency level with the electronic petition system.

Master of Science in Sociology and Social Research / University of Trento (Italy) (2015-2017)
Thesis: "The Oregon Health Insurance Experiment: Meeting health needs and accessing health care." This involved estimating the indirect effect of access to health care by applying the modern approach to mediation analysis on data from the Oregon Health Insurance Experiment.

Bachelor's degree in Sociology / University of Milan-Bicocca (Italy) (2010-2014)
Thesis: "Wellbeing at school. Indications from a randomised controlled trial." This involved estimating the effect of a randomised controlled trial, implemented to evaluate the effectiveness of Family Group Conference in middle schools.

Winter School in "Social Network Analysis" / Centre for Business Network Analysis University of Greenwich, London (UK). (8th January 2018 - Friday 12th January 2018)
This involved learning statistical analysis, visualising social networks with R and Visone and modelling and predicting epidemics using Big Data.

Winter School in "Fundamentals and Methods for Impact Evaluation of Public Policies" / FBK-IRVAPP, Trento (Italy). (8th April 2016 – 13th April 2016)
This involved learning about the theory of causal inference and applying various statistical tools for counterfactual analysis for policy evaluation.

PUBLICATIONS

Hammad, A.T., (2023). "A note on vulnerability". (forthcoming).

Falchetta, G.,Hammad, A.T., (2023). "Tracking global urban green space density trends". (submitted to Nature).

Shayegh S.,[...], Hammad, A.T., et al., (2023). "Prioritizing COVID-19 vaccine allocation in resource poor settings: Towards an Artificial Intelligence-enabled and Geospatial-assisted decision support framework". Plos One.

Hammad, A.T., Falchetta, G., (2022). "Probabilistic forecasting of remotely sensed cropland vegetation health and its relevance for food security". Science of The Total Environment (STOTEN).

G. Falchetta and M. Noussan and A.T. Hammad (2021). "Comparing paratransit in seven major African cities: An accessibility and network analysis". Journal of Transport Geography.

Hammad, A.T., Falchetta, G., Wirawan, I.B.M. (2021). "Back to the fields? Increased agricultural land greenness after a COVID-19 lockdown". Environmental Research Communications (ERC).

Falchetta, G., Hammad, A.T., Shayegh S. (2020). "Planning universal accessibility to public healthcare in sub-Saharan Africa". Proceedings of the National Academy of Sciences (PNAS). Featured in Medicalxpress.

PRESENTATIONS & CONFERENCES

"Tracking global urban green space trends", Highlighted presentation, Session ITS1.11-NP0.2, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023.

"Geospatial analysis for sustainable development", May 2022, EGU General Assembly, Vienna (Austria) (co-convener).

Hammad A., (2019, September). "A Flexible Topic Modelling Approach for Electronic Petitions". Presented at Poltext Conference, Tokyo (Japan).

Hammad A (2019)."AI for Everyone" & "Program Evaluation for GOs & NGOs". Hubud - Dojo, Bali (Indonesia).

Argentin G., Barbetta G., Hammad A., Maggioni M., Rossignoli D., (2017, June). "Promuovere la partecipazione dei giovani ad attività di volontariato produce ricadute positive sulla loro socialità e integrazione scolastica?". Presented at the National Volunteer Conference, Ancona (Italy).

Barbetta G., Argentin G., Hammad A., Maci F., (2016, September). "Aumentare il parental involvement per contrastare l'insuccesso scolastico? Evidenza da una sperimentazione controllata sulle Family Group Conferences". Presented at the Annual ESPAnet Conference, Macerata (Italy).

SKILLS

PYTHON **R** **DOCKER** **GEE** **REDIS**

SQL **GCP** **DO**

LANGUAGES

English (Fluent) **Italian** (Native) **Arabic** (Native) **Indonesian** (Basic)