Federico Milana

Ph.D. in Human-AI Interaction in Machine Learning with expertise in explainability and user-centered design. Experienced in developing AI-driven applications for user studies and perception analysis.

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EXPERIENCE

Postgraduate Teaching Assistant / *University College London*

January 2021 - May 2024

Taught Python in practical tutorials and evaluated coursework for Human-Computer Interaction MSc students.

Research Assistant / *University College London*

August 2019 - November 2019

Investigated UI design factors influencing user trust and autonomy delegation to chatbots, contributing to recommendations for chatbot interfaces.

EDUCATION

Ph.D. in Human-AI Interaction in Machine Learning / *University College London*

September 2020 – November 2024

Thesis: "Evaluating Interaction with Machine Learning Text Classifiers and Interpretability Techniques"
Research on user interaction, explainability, and iterative model refinement in text classification.

MSc in Human-Computer Interaction / *University College London*

September 2018 - August 2019

Graduated with Distinction.

BSc in Computer Science / *King's College London*

September 2015 - August 2018

Graduated with First-class honors. Specialization in Software Engineering.

SKILLS

Machine Learning

NLP

LLMs

Explainability

Programming

Python

PyTorch

XGBoost

scikit-learn

numpy

pandas

Experimental Design

User studies

Academic writing

PUBLICATIONS

Understanding Interaction with Machine Learning through a Thematic Analysis Coding Assistant: A User Study / *CSCW '25: Computer Supported Cooperative Work and Social Computing / Forthcoming Publication*

Exploring how an Interactive ML tool facilitates critical reflection, new insights, and adaptation in analytical processes while uncovering misconceptions about ML in non-expert users.

Chatbots as Advisers: the Effects of Response Variability and Reply Suggestion Buttons / *CUI '23: Proceedings of the 5th International Conference on Conversational User Interfaces / https://doi.org/10.1145/3571884.3597132*

Demonstrating how response variability and reply suggestion buttons significantly increase chatbot advice following.

AWARDS

UCL Faculty of Brain Sciences 2018/2019 Dean's List

August 2019

Academic performance equivalent to top 5% student achievement.

PROJECTS

Interpretable Text Classification / *https://github.com/fmilana/explanations*

Implementing and evaluating LIME, SHAP, and transformers-interpret heatmaps for text classification using XGBoost and BERT in user studies.

Thematic Analysis Coding Assistant / *https://github.com/fmilana/taca*

A desktop application implementing XGBoost to assist the qualitative coding phase of thematic analysis.

Social Trading Chatbot Advisor / *https://github.com/fmilana/socialtradingchatbot*

A simulated social trading environment web application used in online experiments to measure user trust in conversational agents.

VOLUNTEERING

Reviewer for CHI '24, '25

Reviewer for IMWUT '24

Student Volunteer for CHI '23
Hamburg, Germany