

# Federico Milana

Ph.D. in Human-AI Interaction with expertise in machine learning, interpretability and user-centered design. Experienced in developing AI-driven applications for user studies and perception analysis.

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<https://github.com/fmilana> 

## 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 / University College London

September 2020 – November 2024

Research on Human-AI Interaction, implementing gradient boosting, large language models and interpretability techniques 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.

## 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 5<sup>th</sup> 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.

## 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.

## AWARDS

### UCL Faculty of Brain Sciences

#### 2018/2019 Dean's List

August 2019

Academic performance equivalent to top 5% student achievement.

## VOLUNTEERING

### Reviewer for CHI 2024, 2025

### Reviewer for IMWUT 2024

### Student Volunteer for CHI 2023

Hamburg, Germany

## SKILLS

### Machine Learning

NLP

LLMs

Interpretability

### Programming

Python

PyTorch

XGBoost

scikit-learn

numpy

pandas

### Experimental Design

User studies

Academic writing