

# MICHAEL TUETING

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## PERSONAL INFORMATION

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**Nationality:** German

**Residence Permits:** Switzerland

**Born:** 1996 in Gehrden, Germany

**Gender:** male

**Title:** M.Sc.

## RESEARCH

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### PRELIMINARY DISSERTATION CHAPTERS

1. Fragmented Markets: A Function of Low Connectivity and Cultural Frictions? (joint work with [Roland Hodler](#) & [Paul Schaudt](#))

*In this project, we identify the role of cultural frictions, specifically language barriers, in inter- and intra-regional trade within African countries. The dimension of cultural frictions in regional trade has not been extensively studied because cultural frictions are assumed to be non-existent within countries. We argue that such an assumption might be reasonable in culturally homogeneous countries but does not account for the tribal structures within ethnically diverse African countries.*

2. Conflict, Internal Displacement, and Return Migration.

*The second project studies the determinants and effects of internal displacement and return migration in the presence of ongoing conflict. Using detailed subnational data on displacement flows between Syrian governorates, I estimate the determinants of forced migration and return, emphasizing the preferred destination choices of displaced people, their migration routes, and the impact on host communities.*

3. Transportation, Employment Density and Structural Change.

*In this project, I use historical census data from the UK to study the transmission of structural change in space. 1) What is the role of spillovers from nearby industries on the idiosyncratic location-industry employment growth, and 2) what is the role of infrastructure?*

### DATA SCIENCE CONTRIBUTION

- Semi-Automatic Map Digitization:

I developed an integrated approach to automatize the digitization of historical maps using Machine Learning.

In a nutshell: A Convolutional Neural Network is trained on a small number of hand-labeled features to split raw input images into different categories (semantic segmentation). The prediction mask is subsequently georeferenced and transformed to vector geometries ready for use in geoinformation systems.

## EDUCATION

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**University of St.Gallen, Switzerland** Since August 2020  
**Ph.D. Programme in Economics and Finance**  
Specialization: Economics  
Supervisor: [Prof. Dr. Roland Hodler](#)  
Co-Supervisor: [Prof. Beatrix Eugster, Ph.D.](#)

**Leibniz University Hannover, Germany** October 2015 - July 2020  
**M.Sc. with a specialization in Empirical Economics and Econometrics** July 2020  
Minor: International Environment and Development Studies  
Thesis: "*Using Machine Learning to Digitize Maps: An Application to Historical Road Densities in Africa*"  
(Grade: 1.0).  
Graduated with honors.  
Final grade: 1.2

**B.Sc. Economics and Management** September 2018  
Bachelor thesis: "*Pre-Colonial Ethnic Homelands and Subnational Borders: The Case of Kenya, Uganda and Tanzania*" (Grade: 1.0).  
Final grade: 2.0

## PROFESSIONAL EXPERIENCE

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### RESEARCH ASSISTANCE

**University of St.Gallen** Since August 2020  
*Research Assistant*  
*Swiss Institute for International Economics and Applied Economic Research (SIAW-HSG)* *St.Gallen*

**Leibniz University Hannover** November 2018 - January 2020  
*Research Assistant*  
*Institute of Macroeconomics (MAK)* *Hannover*

### TEACHING

**Master level**  
*Teaching Assistant*

- Political Economics (2021-2022) (University of St.Gallen)

**Bachelor level**  
*Teaching Assistant*

- Public Sector Economics (2022) (University of St.Gallen)
- Development Economics (2020-2022) (University of St.Gallen)
- Data Handling: Import, Cleaning, and Visualisation (2021-2022) (University of St.Gallen)
- Introduction to Macroeconomics (2017-2019) (Leibniz University Hannover)
- Operations Management (2017) (Leibniz University Hannover)

### INDUSTRY

**Volkswagen Ireland** July 2015 - September 2015  
*Intern* *Dublin*

- Internship at the aftersales department of Volkswagen Ireland

## AWARDS

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### Dean's List

2018/19 & 2019/20

- Awarded to the best 5% of the study cohort by the Faculty of Economics and Management of the Leibniz University Hannover

## TECHNICAL SKILLS

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### Statistical Programming

R, Python

### GIS

GRASS GIS, QGIS, Google Earth Engine, ArcGIS, R, Remote Sensing

### Machine Learning

Keras, Tensorflow

### Tools

RStudio, STATA, L<sup>A</sup>T<sub>E</sub>X, GitHub