

Alexander Guggenberger

Data Scientist



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Expertise

- R, R Markdown, R Shiny
- Python, oTree (Html, JS, CSS)
- Statistics, Econometrics, Empirical Research, Causal Inference, Experimental Design
- Teaching

Languages

- English (C2)
- German (native)
- Spanish (B2)
- French (A1)
- Chinese (A1)

Other Skills

Besides my passion for data science and research, I am a professional pianist (mostly at weddings) and keyboardist (currently at Legends Of Rock and other bands), and I play the drums in a soul/funk band.

Education

10/2021 - ongoing
Salzburg/Vienna

Paris Lodron University Salzburg
Ph.D. in Economics

- Project 1: I designed an experiment which tests game theoretical equilibria of a voting game in the laboratory and programmed the experiment using the oTree framework which involved coding in Python, html, Javascript, CSS. Sessions are currently conducted at the Vienna Center for Experimental Economics.
- Project 2: I will build a structural model of the strategic communication between forecasters and decision makers and estimate its parameters using data from a corporate sponsor. I have already done the descriptive and exploratory analysis, performance benchmarking etc using R and R Markdown.
- Project 3: An experimental study will investigate a novel approach of eliciting private information held by human forecasters, such that it can be used as an input for a prediction algorithm. This project will be sponsored by the Heinrich Graf Hardegg'sche Stiftung.

10/2018 - 03/2020
Vienna

University of Vienna
M.Sc. in Economics (GPA 1.38)

- Focus on econometrics, data analysis, causal inference and quantitative methods
- Empirical Master's thesis (grade excellent) on the effect of rent control on supply using census data from Statistics Austria. Statistical programming done in Stata.

10/2015 - 10/2018
Vienna

University of Vienna
B.Sc. in Economics (GPA 1.82)

09/2006 - 06/2014
Bad Vöslau

Bundesrealgymnasium Bad Vöslau
Matura with distinction

Work Experience

10/2021 - ongoing
Salzburg/Vienna

Shisolabs GmbH
Data Scientist

- Responsible for coding and reporting prototypes of data driven solutions to business problems in R (R Markdown, R Shiny). Two major projects were:
- Forecasting of panel format data from a manufacturing company. I tested various methods ranging from ETS, ARIMA and other autoregressive models to regularization (LASSO) and machine learning (Random Forests) based methods and was able to beat the forecasting system currently in use.
- Algorithmic trading recommendations. A binary classification problem which I approached both through traditional econometric models (multiple linear, logistic, probabilistic regression) and machine learning methods (Random Forest, LASSO). Following the training/testing set methodology, my counterfactual automatized trading strategy significantly outperformed the historical trading behaviour.

05/2021 - 08/2022
Salzburg/Vienna

University of Salzburg
Research Assistant

- Data analysis & statistical programming in R. Preparation of Project 1 of my Ph.D. (vide supra)

02/2020 - 04/2021
Vienna

University of Vienna
Research Assistant

- Projects on the intersection between econometric and machine learning methods for demand forecasting using real world data.

03/2020 - 06/2020
Vienna

Samariterbund
Extraordinary National Service due to Covid 19

09/2019 - 02/2020
Vienna

University of Vienna
Tutor for the Course "Quantification and Statistics"

- Presentation of the problems to the students in the tutorial course.

07/2019 - 09/2019
Rostock

Max Planck Institute for Demographic Research
Trainee

- Various projects in the Fertility and Wellbeing Lab which involved the descriptive, explorative and regression analysis of socioeconomic data sets (SOEP, PSID) in Stata.

2017 - 2019
Vienna

Austrian Academy of Sciences
Working Student

- Technical assistant in the administration during lecture-free periods (6 months total).

2016 - ongoing
Vienna

Self-Employed
Private Tutor in Mathematics, Statistics, Statistical Programming

- Tutoring of school kids (which greatly enhanced my interpersonal, communication & teaching skills)
- Statistical consulting for University projects and theses involving data analysis and programming in R and Python, ranging from Social Sciences to Bio Data Science

10/2014 - 06/2015
Mödling

ÖJAB Youth Residence Mödling
National Service