



## Omer Kara

## Curriculum Vitæ

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| <b>CONTACT INFORMATION</b>   | Eskisehir Osmangazi University<br>College of Economics and Administrative Sciences<br>Department of Economics, Office A1-21<br>Eskisehir, 26040 Turkey   | ☎ : +90 (539) 794-0221<br>✉ : omer.kara.ylsy@gmail.com<br>A :<br>i :   |
| <b>RESEARCH INTERESTS</b>    | <b>Primary:</b> Data Science, Time Series Econometrics, Spatial Econometrics, Cryptoeconomics<br><b>Secondary:</b> Agricultural Economics, Applied Microeconomics, Applied Macroeconomics  |  |
| <b>INDUSTRY INTERESTS</b>    | <b>Primary:</b> Data Scientist, Econometrician, Consultant<br><b>Secondary:</b> Quantitative Analyst, Software Developer   |  |
| <b>ACADEMIC APPOINTMENTS</b> | <b>Faculty Member, Ph.D.</b><br>Department of Economics<br>Eskisehir Osmangazi University, Eskisehir, Turkey<br><br><b>Postdoctoral Researcher</b><br>Department of Economics<br>North Carolina State University, Raleigh, NC, USA   | January 2019 – Present<br><br><br><br><br><br>May 2018 – August 2018   |
| <b>EDUCATION</b>             | <b>Ph.D., Economics</b><br>North Carolina State University, Raleigh, NC, USA<br>• Dissertation: <i>Three Essays in Applied Spatial and Time Series Econometrics</i><br>• Advisor: Professor Barry Goodwin<br>• Area of Study: Time Series Econometrics and Spatial Econometrics<br><br><b>M.S., Agricultural and Resource Economics</b><br>North Carolina State University, Raleigh, NC, USA<br><br><b>B.A., Economics</b><br>Bahcesehir University, Istanbul, Turkey  | May 2018<br><br><br><br><br><br><br>May 2012<br><br><br>June 2008  |
| <b>INDUSTRY EXPERIENCE</b>   | <b>Data Scientist and Econometrician</b><br>CHS Inc., Inver Grove Heights, MN, USA<br>• Job: Churn Loss Analysis (in progress)<br>• Tools: Econometrics, Machine Learning, R, R Markdown, ETL, EDA<br><br><b>Software Developer</b><br>CHS Inc., Inver Grove Heights, MN, USA<br>• Job: Building the “Crack Spread Platform”, a shiny web app (in progress)<br>• Tools: R, R Markdown, shiny, HTML, CSS, Azure DevOps, Git, ETL, EDA<br><br><b>Software Developer</b><br>CHS Inc., Inver Grove Heights, MN, USA<br>• Job: Building the “Hog Crush Platform”, a shiny web app (in marketing)<br>• Tools: R, R Markdown, shiny, HTML, CSS, Azure DevOps, Git, ETL, EDA | July 2022 – Present<br><br><br><br><br><br><br>January 2022 – Present<br><br><br><br><br><br>August 2021 – Present |
| <b>RESEARCH EXPERIENCE</b>   | <b>Postdoctoral Researcher</b><br>Department of Economics<br>North Carolina State University, Raleigh, NC, USA<br>• Project Details: <ul style="list-style-type: none"> <li>- Funding: USDA Forest Service</li> <li>- Supervisor: Professor Barry Goodwin and Professor Jeffrey Prestemon</li> </ul>   | May 2018 – August 2018   |

- Project Title: “Understanding Global Forest Product Market Effects of Trade Measures to Address Illegal Wood Fiber Sourcing”
- Created a collaborative reproducible research environment using [Git](#), [R](#), [R Markdown](#).
- Accelerated data collection/cleaning and statistical/exploratory data analysis steps with flexible user-written [R](#) functions and check procedures.

#### **Research Assistant**

August 2016 – January 2017

Department of Economics

North Carolina State University, Raleigh, NC, USA

- Project Details:
  - Funding: [North Carolina State University](#)
  - Supervisor: [Professor Barry Goodwin](#)
  - Project Title: “Dynamics of U.S. Housing and Primary Building Materials in the Presence of Structural Breaks”
- Created a conceptual framework, collected data in a reproducible way, and performed a through econometric analyses on [R](#) and [GAUSS](#).

#### **TEACHING EXPERIENCE**

#### **Independent Instructor**

January 2019 – Present

Department of Economics

Eskisehir Osmangazi University, Eskisehir, Turkey

- Created course design, lecture format, course materials, and online assessment materials.
- Authored course materials are available at the [Akademi Ekonometri Web Site](#).
- Course videos are available on [Akademi Ekonometri YouTube Channel](#).
- Courses in English: [Economics](#) (14 sections)
- Courses in Turkish: [Econometrics I](#) (9 sections), [Econometrics II](#) (11 sections), [Time Series Analysis](#) (7 sections), [Econometric Research I](#) (8 sections), [Econometric Research II](#) (7 sections), [Economics](#) (10 sections), [Introduction to Economics](#) (3 sections), [Econometrics](#) (1 section), [Econometric Modelling and Time Series Analysis - Masters](#) (3 sections), [Financial Econometrics - Masters](#) (2 sections)

#### **Teaching Assistant**

January 2017 – May 2018

Department of Economics

North Carolina State University, Raleigh, NC, USA

- Assisted Dr. Margolis and Dr. Fiori with grading assignments and exams.
- Courses: [Intermediate Microeconomics](#) (1 section), [Macro Fundamentals](#) (1 section)

#### **Independent Instructor**

August 2014 – May 2016

Department of Economics

North Carolina State University, Raleigh, NC, USA

- Created course design, lecture format, and assessment materials.
- Developed and lectured course materials.
- Mentored students providing individualized learning support and online assignments.
- Courses: [Fundamentals of Economics](#) (6 sections), [Principles of Microeconomics](#) (2 sections)

#### **Teaching Assistant**

August 2013 – May 2014

Department of Economics

North Carolina State University, Raleigh, NC, USA

- Assisted Dr. Hyman as head teaching assistant and lab instructor.
- Developed and lectured lab materials independently.
- Improved students’ performance by implementing a collaborative learning environment.
- Courses: [Fundamentals of Economics](#) (5 sections)

#### **TECHNICAL SKILLS**

- **Programming:** [R](#), [SAS](#), [Python](#), [SQL](#), [MATLAB](#), [GAUSS](#)
- **Data Science:** [Econometrics](#), [Statistics](#), [Machine Learning](#), [Web Scraping](#), [ETL](#), [EDA](#)
- **GIS:** [Geo-Spatial Data](#), [ArcGIS](#), [QGIS](#), [GeoDa](#)

- **Digital Typesetting:**  $\LaTeX$ ,  $\BibTeX$
- **Other Skills:** R Markdown, shiny, Azure DevOps, Git, Reproducible Research

**CERTIFICATIONS  
AND  
CERTIFICATES**

**Certifications**

- Data Scientist Associate Certificate, DataCamp ⓘ January 2023 – January 2025

**Certificates**

- Deep Learning in Python, DataCamp
- Unsupervised Learning in Python, DataCamp
- Machine Learning with the Experts: School Budgets, DataCamp
- Supervised Learning with scikit-learn, DataCamp
- Statistical Thinking in Python Part 1 and Part 2, DataCamp<sup>1,2</sup>
- Interactive Data Visualization with Bokeh, DataCamp
- Introduction to Data Visualization with Python, DataCamp
- Introduction to Databases in Python, DataCamp
- Merging DataFrames with pandas, DataCamp
- Manipulating DataFrames with pandas, DataCamp
- Pandas Foundations, DataCamp
- Cleaning Data in Python, DataCamp
- Importing Data in Python Part 1 and Part 2, DataCamp<sup>1,2</sup>
- Python Data Science Toolbox Part 1 and Part 2, DataCamp<sup>1,2</sup>
- Intro to Python for Data Science, DataCamp
- Joining Data in PostgreSQL, DataCamp
- Intro to SQL for Data Science, DataCamp
- SAS Programming 2: Data Manipulation Techniques, SAS
- SAS Programming 1: Essentials, SAS
- Statistical Inference, Coursera
- Exploratory Data Analysis, Coursera
- Reproducible Research, Coursera
- Getting and Cleaning Data, Coursera
- R Programming, Coursera
- The Data Scientist's Toolbox, Coursera
- Maps and the Geospatial Revolution, Coursera
- SAS Programming Introduction: Basic Concepts, SAS

\*More references are available upon request.

**SCHOLARSHIPS  
FELLOWSHIPS  
HONORS  
AND  
AWARDS**

- **Graduate Research Assistantship** August 2016 – January 2017  
North Carolina State University, Raleigh, NC, USA
- **Graduate Teaching Assistantship** August 2013 – May 2018  
North Carolina State University, Raleigh, NC, USA
- **Scholarship for Graduate Education in the U.S.** August 2010 – August 2017  
Ministry of National Education, Ankara, Turkey  
Full-tuition scholarship including stipend, health insurance, and travel expenses.
- **Grant for Outstanding Academic Performance** September 2005 – June 2007  
Bahcesehir University, Istanbul, Turkey  
Stipend for attaining a GPA of at least 3.8 for four semesters.
- **Scholarship for Undergraduate Education** September 2003 – June 2008  
Bahcesehir University, Istanbul, Turkey  
Full-tuition scholarship including stipend.

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| <b>REFEREED<br/>JOURNAL<br/>PUBLICATIONS</b> | [1] <b>Kara, O.</b> , Acaroglu, H., Najafi, A., and Yuruk, B., (2021). AN ECONOMIC AND TECHNICAL REVIEW FOR THE UTILIZATION OF HVDC IN TURKEY AND IN THE WORLD. <i>Konya Journal of Engineering Sciences</i> , 9(3) 809-835. [doi]  |
| <b>CONFERENCE<br/>PRESENTATIONS</b>          | <p>[1] <b>Kara, O.</b>, Price Dynamics and Structural Breaks in Speculative Markets: A Case Study of Cryptocurrency. International Conference on Economics (EconTR2020@Eskişehir), Eskişehir, Turkey, 10-12 September 2020.</p> <p>[2] <b>Kara, O.</b>, Identifying and Understanding the Structural Break in Meat Demand in the USA. International Conference on Economics (EconTR2020@Eskişehir), Eskişehir, Turkey, 10-12 September 2020.</p>  |
| <b>OTHER<br/>PUBLICATIONS</b>                | [1] <b>Kara, O.</b> , (2018). Emek Piyasası, İstihdam ve İşsizlik. MAKROEKONOMİ Politika ve Uygulama (pp.544-570), Ankara: Nobel Yayın Dağıtım. <i>Book Chapter Translation</i> .   |
| <b>WORKING<br/>PAPERS</b>                    | <ul style="list-style-type: none"> <li>• “Dynamics of U.S. Housing and Primary Building Materials in the Presence of Structural Break” with <a href="#">Barry Goodwin</a> and <a href="#">Jeffrey Prestemon</a></li> <li>• “The Impact of Religion on Environmental Performance: Applied Spatial Econometrics”</li> <li>• “Price Dynamics and Structural Breaks in Speculative Markets: A Case Study of Cryptocurrency”</li> <li>• “Structural Break in U.S. Meat Demand: Evidence from LA/AIDS Model”</li> <li>• “The Effect of Quality of Institutions on Agricultural Productivity”</li> </ul> |
| <b>WORKS IN<br/>PROGRESS</b>                 | <ul style="list-style-type: none"> <li>• “The Differentiated CO<sub>2</sub> Emission Based Vehicle Taxes in Turkey: Efficiency, Equity and Tax Revenue Impacts”</li> <li>• “Economic Consequences of Foreign Player Restriction in European Soccer Leagues”</li> </ul>  |
| <b>ACADEMIC<br/>SERVICE</b>                  | <p><b>Erasmus Coordinator</b> January 2019 – Present<br/> <a href="#">Department of Economics</a><br/> <a href="#">Eskişehir Osmangazi University</a>, Eskişehir, Turkey</p> <p><b>Referee Service</b></p> <ul style="list-style-type: none"> <li>• Çankırı Karatekin Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi</li> </ul>  |
| <b>LANGUAGES</b>                             | <ul style="list-style-type: none"> <li>• English (C2 Proficiency - fluent)</li> <li>• Turkish (native)</li> </ul>   |
| <b>POPULAR MEDIA</b>                         | <ul style="list-style-type: none"> <li>• Founder of <a href="#">Akademi Ekonometri Web Site</a> and <a href="#">Akademi Ekonometri YouTube Channel</a>.</li> </ul>  |
| <b>MORE<br/>INFORMATION</b>                  | More information and auxiliary documents can be found at <a href="#">my web site</a> .  |

## REFERENCES

### Dr. Barry Goodwin

William Neal Reynolds Distinguished Professor  
Agricultural and Resource Economics  
North Carolina State University  
Raleigh, NC 27695-8109

☎ : +1 (919) 515-4620

✉ : [bkgoodwi@ncsu.edu](mailto:bkgoodwi@ncsu.edu)

👤 : Dr. Goodwin was my graduate advisor and post doctoral supervisor.

### Dr. Walter Thurman

William Neal Reynolds Distinguished Professor  
Agricultural and Resource Economics  
North Carolina State University  
Raleigh, NC 27695-8109

☎ : +1 (919) 515-4545

✉ : [wally\\_thurman@ncsu.edu](mailto:wally_thurman@ncsu.edu)

👤 : Dr. Thurman was a member of my doctoral committee.

### Dr. Jeffrey Prestemon

Adjunct Professor  
Forestry and Environmental Resources  
North Carolina State University  
Raleigh, NC 27695-8109

☎ : +1 (919) 549-4033

✉ : [jprestemon@fs.fed.us](mailto:jprestemon@fs.fed.us)

👤 : Dr. Prestemon was a member of my doctoral committee.

\*More references are available upon request.