STEVEN KERR

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EDUCATION

M.Sc. Data Science for Public Policy   **Sep 2021—May 2024**

The Hertie School of Governance, Berlin, Germany
- Interdisciplinary program focusing on applying data science to policy questions
- Receiving merit-based partial tuition waiver
- Current Grade: 1.6 (scale 1-6, 1 = best)

B.A. Economics, *with honors*   **Aug 2015—Apr 2019**

Pepperdine University, Los Angeles, California, USA
- Thesis: "Effects of Foreign Exchange Rates on US-Japan Trade Relations"
- Final Grade: 3.68/A- (scale 0-4, 4 = best)

Certificate in Dispute Resolution   **Aug 2017—Apr 2019**

Pepperdine Law School, Los Angeles, California, USA
- Eight credit hours (96 classroom hours) studying conflict management and dispute resolution
- Submitted four separate 20+ page reports applying concepts to real-world conflicts

PROFESSIONAL EXPERIENCE

Junior Data Scientist, CPC Analytics   **Jun 2022—May 2023**

Berlin, Germany
- Assisted WHO personnel in setting up a global surveillance system and the development of a web-based Shiny application using R to inform both WHO decision-makers and the wider public
- Conducted in-depth analyses of the epidemiological characteristics, risk factors, and demographic trends surrounding the 2022-23 mpox (formerly known as monkeypox) outbreak using R and the tidyverse, the outputs from which were incorporated into 20 bi-weekly Acute Events Management presentations, 20 bi-weekly situational reports, three quarterly risk assessments, and three quarterly Emergency Committee meetings
- For three months, served as the sole data scientist for WHO's mpox data warehouse which involved maintaining XML and SQL data pipelines for six WHO Regional Offices, configuring public and private APIs, and creating Excel templates with built-in data validation to facilitate data uploads by end users
- Utilised Bayesian statistics and R programming language to generate short-term projections for 27 countries' respective mpox case counts and reproduction numbers (R_t) to inform WHO personnel
- Contributed to the development of two R packages to assist WHO personnel with performing common data science tasks such as querying WHO servers, cleaning epidemiological data, and generating data visualisations

Procurement Analyst, U.S. Space Force   Aug 2019—Jul 2021

Los Angeles, California, USA
- Procured supplies and services necessary to support $800M U.S. satellite launch program
- Generated time series forecasts, conducted industry analyses, and frequently drafted 30+ page reports presenting decision-makers with viable options during negotiations

Accreditation Assistant, Pepperdine University   Jan 2019—Apr 2019

Los Angeles, California, USA
- Supported Pepperdine University's 5-Year Economics Department Review by running focus groups involving 15% of senior Economics students to gauge programme effectiveness
- Analyzed survey data and presented findings to Economics faculty and staff

Director of Education, Pepperdine Model United Nations   Apr 2018—Apr 2019

Los Angeles, California, USA
- Led weekly 1hr 30min sessions to train 30+ undergraduate and graduate students in research methods, policy analysis, memo writing, public speaking and debate skills
- Formulated reports on a diverse set of topics such as external debt sustainability, financing for renewable energy projects, and the economic impact of intellectual property transfer

Economics Tutor, Pepperdine University   Aug 2018—Dec 2018

Los Angeles, California, USA
- Demonstrated knowledge of advanced economic theory while tutoring 15 undergraduate students
- Created individual progress plans and organized group review sessions ahead of exams

Procurement Intern, U.S. Air Force   Jun 2018—Aug 2018

Colorado Springs, Colorado, USA
- Assisted with the procurement of $1M base-wide transition to cloud infrastructure
- Received formal on-the-job training in market research, price analysis, and acquisition strategy

Research Assistant, Pepperdine University   May 2017—Jun 2017

Los Angeles, California, USA
- Conducted qualitative study examining student perspectives on diversity at Pepperdine University
- Performed literature review, ran 12 focus groups, and transcribed student interviews
- Generated report synthesizing findings and presented key takeaways at research symposium

Associate Editor, Pepperdine University   Jan 2016—Apr 2017

Los Angeles, California, USA
- Evaluated submissions for the *Pepperdine Journal of Communication Research*
- Nominated submissions based on academic rigor, organizational structure, and grammar

RESEARCH PROJECTS

COVID Fake News Detection   May 2022
Machine Learning (GRAD-C24)

- Trained a machine learning algorithm to detect fake Tweets related to COVID-19 using **Python**
- Tested the accuracy of the model across time periods to measure the extent to which the effectiveness of such models degrade over time due to the rapidly evolving nature of fake news

UK COVID Dashboard Disaggregated by Age Group   Dec 2021
Introduction to Data Science (GRAD-C11)

- Utilized **R** to create a Shiny app-hosted dashboard to track COVID case rates in England with added functionality of disaggregating case rates by age group
- Accessed UK government APIs to obtain COVID case rate data and geodata

Validating COVID Self-Tests with Image Recognition   Dec 2021
Data Structures & Algorithms (GRAD-C9)

- Developed an algorithm capable of validating COVID self-tests using image recognition
- Used data from the MNIST database of handwritten digits, a collection of more than 70,000 examples, to train the Machine Learning algorithm to recognize handwritten serial numbers and COVID test results using **Python**

Effects of Foreign Exchange Rates on U.S.-Japan Trade Relations   Apr 2019
Applied Econometrics (ECON 410)

- Utilized **R** to examine the extent to which fluctuations in the U.S. dollar-Japanese yen (USD-JPY) exchange rate impact bilateral trade between the U.S. and Japan
- Performed Granger causality tests, impulse-response tests, and vector autoregression (VAR) analyses to test hypothesis using statistical packages in R

RESEARCH PAPERS

Description of the First Global Outbreak of Mpox   Jul 2023
Laurenson-Schafer H, Sklenovská N, Hoxha A, **Kerr SM**, Ndumbi P, Fitzner J, et al. Description of the first global outbreak of mpox: an analysis of global surveillance data. The Lancet Global Health. 2023 Jul; 11(7):e1012-e1023. doi:10.1016/S2214-109X(23)00198-5.

TECHNICAL COMPETENCIES

R
Passed LinkedIn Skill Assessment for R (Top 5%)

- Frequently use R to clean, wrangle, model, and visualize data for projects and papers
- Advanced familiarity with tidverse (tidyr, dplyr, ggplot), sf (geocoding), and Shiny packages

Python/Jupyter Notebook

- Utilize Python to prepare data, fit machine learning models, and visualize results
- Advanced experience with pandas, numpy, sklearn, matplotlib and seaborn packages

SQL

Certificate in Using Databases with Python

- Experience with creating, retrieving, updating, and deleting database information with SQL
- Used SQL to create a database of web-scraped geo-location data for data visualization project

Machine Learning

- Developed a ML algorithm capable of validating COVID-19 rapid self-tests using image recognition
- Currently implementing a project that combines ML and Natural Language Processing to detect fake social media posts about public health

Other Coding Skills

- Git/GitHub
- Command Line/Bash
- Shiny Apps & Dashboards
- Web-scraping (HTML/XML)
- API Requests

MS Office

- Advanced experience with using Excel formulas, functions, and pivot tables
- Frequently format reports, incorporate graphs & charts, and create mock-ups in Word
- Routinely deliver presentations, trainings, and briefings using PowerPoint

HONOURS & AWARDS

• **Merit-based Tuition Waiver, Hertie School**	**2021—2024**
• **Contracting Civilian-in-Training of the Year, U.S. Air Force**	**2020**
• **Regents' Scholar Award (Top Academic Scholarship), Pepperdine University**	**2015—2019**
• **Cum Laude, Pepperdine University**	**2019**
• **Best Delegate Award, National Model United Nations (China)**	**2018**
• **Position Paper Award, National Model United Nations (New York)**	**2018**
• **Blanche E. Seaver Faculty-Staff Scholarship, Pepperdine University**	**2018**
• **Dean's List, Pepperdine University**	**2017**

COMMUNITY INVOLVEMENT

• **Tech Society, Hertie School**	**2022—Present**
• **Data Science Society, Hertie School**	**2021—Present**
• **Sigma Iota Rho (ΣIP) National Honors Society**	**2017—2019**
• **Student Government Representative, Pepperdine University**	**2016—2017**

LANGUAGES

English	Spanish	German	French
Native	**B2**	**B1**	**B1**