

# David, Yen-Chieh Liao

Research Fellow at the Chair of Comparative Politics  
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## RESEARCH INTERESTS

distributive politics, legislative politics, quantitative study of ideology and political attitudes using legislative voting and text data, the application of computational social science.

## EDUCATION

PhD Candidate at Department of Government, University of Essex	Nov 2018 – Expected Jul 2022
MPhil/PhD Student at Department of Government, University of Essex	Oct 2017 – Nov 2018
MA in Public Administration, National Taipei University	Sep 2010 – Feb 2014
BA in Public Administration, National Taipei University	Jun 2005 – Aug 2010

## ADDITIONAL TRAINING

2021 Standard Student Program, *Machine Learning Summer Schools (Taipei)*, August 2 - August 20, 2021

2021 Quantitative Methods for Causal Inference and Policy Evaluation (taught by Dr. Adam Zelizer), *Essex Summer School in Social Science Data Analysis*, 25th Jul - 6 Aug 2021

2021 Advanced Methods for Text-as-Data: Natural Language Processing (taught by Prof. Burt Monroe), *Essex Summer School in Social Science Data Analysis*, 25th Jul - 6 Aug 2021


2019 Introduction to Bayesian Analysis for the Social Sciences (taught by Prof. Ryan Bakker), *Essex Summer School in Social Science Data Analysis*, 22 Jul – 4 Aug 2019

2018 Ideal Point Estimation and Scaling Methods (taught by Prof. Royce Carroll), *Essex Summer School in Social Science Data Analysis*, 6 - 17 Aug 2018

2018 Generalized Linear Models (taught by Dr. Patrick Shea), *Essex Summer School in Social Science Data Analysis*, 22 Jul - 2 Aug 2018

## PHD DISSERTATION PROJECT

**Title:** *“Pork Barrel, Polarization and Competition within the Congress: The Applications of Computational Social Science”*

Chapter 1: Mayors and Pork Barrel: Legislative Experience Bias in Intergovernmental Transfers to Taiwan Municipalities 

Chapter 2: Electoral Reform and Disunited Polarization: Evidence from Legislative Roll Calls 

Chapter 3: When Speaking of Pork: Exploring Parliamentary Questions Using NLP Transformers

Chapter 4: Measuring Party Cohesion on Parliamentary Question Keywords (with Calvin, Yu-Ceng Liao, Post Doctoral Research Fellow at Taiwan Studies Center, National Chengchi University)

## WORKING PAPERS & WORKS IN PROGRESS

Factionalism and the Red Guards under Mao’s China: Ideal Point Estimation Using Text Data (with Yi-Nung Tsai, National Chengchi University; Dechun Zhang, Leiden University) 

Income Inequality, Party Misperception and Democracy Distrust (with Royce Carroll, University of Essex; Li Tang; Tzu-Ping Liu, University of Taipei)

This is What We Hope: Estimating Perceptions on Political Trust (with Li Tang and Tzu-Ping Liu)

Topic Models for Short Text (with Julia Ju Yuon Park, University of Essex)

Estimating Fiscal Policy Objectives in the UK with Text Analysis (with Li Tang and Pei Kuang, University of Birmingham)

Measuring China's Online Nationalists on Weibo (with Dechun Zhang )

## EXPERIENCE

### Teaching Assistant

Teaching Assistant to Dr. Johannes Karreth (Ursinus College) 2L Introduction to Quantitative Methods in R, 54<sup>th</sup> Essex Summer School in Social Science Data Analysis, July 26 – August 6 2021

Teaching Assistant to Prof. Ken Benoit (LSE) Quantitative Text Analysis Using R and Dr. Nicole Baerg (University of Essex) Linking Theory with Text as Data, *Empirical Implications of Theoretical Models Europe (EITM Europe)*, Jun 14 - Jun 25 2021

Teaching Assistant to Dr. Akitaka Matsuo (University of Essex), VB21 - Machine Learning with Big Data for Social Scientists, 15<sup>th</sup> ECPR Summer School in Methods and Techniques, Aug 10 - 14 2020

Teaching Assistant to Prof. Royce Carroll, 3L Scaling Methods for Social Science: Measuring Patterns and Preferences in Surveys and Behavior, 53<sup>rd</sup> Essex Summer School in Social Science Data Analysis, Aug 10 – 21 2020

Teaching Assistant to Dr. Iulia Cioroianu (University of Bath), 1B Introduction to Quantitative Text Analysis, 53<sup>rd</sup> Essex Summer School in Social Science Data Analysis, Jul 13 - 24 2020

Teaching Assistant to Dr. Raymond Hick (Columbia University), 1B Introduction to Quantitative Text Analysis, 52<sup>nd</sup> Essex Summer School in Social Science Data Analysis, Jul 13 - 24 2019

### Research Assistant

Graduate Research Assistant to Prof. Royce Carroll, University of Essex, Jun 2019 – Oct 2019

Senior Research Assistant to Prof. Chung-li Wu, Institute of Political Science, Academia Sinica, Feb 2014 – Jul 2017

Graduate Research Assistant to Prof. Ching-jyuhn Luor, Department of Public Administration and Policy, National Taipei University in Taiwan, Jul 2010 - Jan 2014

## SERVICES TO ACADEMIC ACTIVITIES

### Manuscript Referee

Political Studies Review; Economics - The Open-Access, Open-Assessment Journal

### Membership

2019 EPSA; 2020 MPSA; 2020 APSA; 2021 EPSA

### Seminar Organiser

Co-organizer for POPE Research Group (Public Opinion, Parties and Elections) for early career researchers at Department of Government, the University of Essex, Oct 2019 - May 2020.

Co-organizer for HEROES (Helping Each-other Research On Empirical Subjects) / PhD Colloquium at Department of Government, the University of Essex, Oct 2018 - May 2019.

## SKILLS

**Programmings** R (basic statistical analysis, visualization, machine learning in *mlr3* framework, multiple applications to natural language processing), Python (natural language processing, machine learning, deep learning and Transformers with Tensorflow)

**Database** MySQL & MySQLWorkbench

**Editing** L<sup>A</sup>T<sub>E</sub>X, HTML & CSS (working knowledge of web editing and webscraping), Hugo

**High Performance Computing** AWS, CERES (HPC, University of Essex)

## GRANTS

Awarded 2021 Taiwanese Overseas Pioneers Grants (**TOP Grants**), Taiwan's Ministry of Science & Technology (MOST) and The Science & Technology Policy Research and Information Center (STPI) of the National Applied Research Laboratories of Taiwan (August 2021- July 2022) (USD\$32,000)

Received 2019 Departmental Fund (£450) and Travel Grant from Taiwan's Council of Indigenous Peoples for attending 2019 EPSA Conference (USD\$630)

Received The 2018 Attendance Scholarships (£250) to Essex Summer School in Social Science Data Analysis

Awarded The Taiwan Government Scholarship to Study the PhD Programme in the Field of Legislative Studies and Comparative Politics in the UK (August 2017- July 2021), USD\$168,000

## TOOLKIT

**asmcjr** (with Dave Armstrong, Royce Carroll, Christopher Hare, Ryan Bakker, Keith Poole, Howard Rosenthal)

The `asmcjr` package supports the book "*2nd Analyzing Spatial Models of Choice and Judgment*", and streamlined functions for scaling and visualising estimates with `ggplot2`.

**legisCrawler** (with Calvin Yu-Ceng Liao)

An automation web crawling framework for retrieving parliamentary questions on The Website of Legislative Yuan (<https://lis.ly.gov.tw/>) based on Selenium & Scrapy and Chrome browser.

**bisCrawler** (with Li Tang)

An automation web crawling framework for retrieving for Extracting Central Bankers' Speeches on the Website of Bank for International Settlements (<https://www.bis.org>) based on Selenium and Chrome browser.

**legisTaiwan** (coming soon)

An R package for searching and retrieving the titles of budgets, the legislation, the speeches and legislator demographics from Taiwan Parliamentary Data Catalogs via Parliamentary Library API.

## REFERENCE

**Prof. Royce Carroll**, Professor in Department of Government, The University of Essex and Director of The Essex Summer School in Social Science Data Analysis.

**Dr. Nicole Baerg**, Senior Researcher at the Bank of England and Senior Lecturer (Associate Professor) in Department of Government, University of Essex

**Dr. Pei Kuang**, Associate Professor in Macroeconomics, University of Birmingham

**Prof. Chung-li Wu**, Research Fellow (Professor) and Director, Institute of Political Science, Academia Sinica, Taipei.

**Dr. Tamir Libel**, Senior Lecturer (Associate Professor) at the Swedish Defence University