Timothy R. McDade

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Durham, NC, USA

Education

PhD program: Duke University — 2018–
Political Science: Political Economy, Quantitative Methods
Taking Qualifying Exams in May 2020

BS, Honors: The College of William & Mary — 2008–2012
Mathematics and Chinese Language & Literature

Tsinghua University — 2010
Coursework in Chinese Language and Culture

Work Experience

DevLab @ Duke, Duke University
Research Associate, Machine Learning for Peace — 2018 -

- Constructing an event dataset and natural language processing algorithm to predict democratic backsliding, civil space closures, and authoritarian influence across the world.
- Constructing dataset of economic indicators for inclusion in event prediction model.

Microsoft, Beijing, China and Redmond, WA, USA — 2012–2018
Data Scientist, Microsoft Azure Business Analytics — 2014–2018

- Led market analytics for China Azure.
- Relocated to Beijing in August 2016 to provide deeper in-country context, make specific recommendations based on the geopolitical climate, and improve the relationship between the Chinese and USA Azure teams.
- Built analytical tools to inform executive decisions in these key areas:
  - Strategy to improve market standing as a foreign company in China: advocated the improvement of web direct business (B2C) to capitalize on the scalable nature of cloud computing.
  - Price changes based on data from competitive analyses and price elasticity calculations.
  - Mitigation of datacenter capacity constraints based upon analysis of customer usage trends.
  - More effective marketing campaigns via lifetime value analysis and cost-per-trial conversion analysis.
  - Introduction of machine learning models to reduce customer churn and identify top tier customers.
  - Improvement of the web direct (B2C) customer experience: showed shortcomings in the effectiveness of tele-sales.
- Enabled data-driven and market-based insights that influenced business decisions leading to 731% growth in Microsoft Azure China's monthly revenue over a 27-month period.

Program Manager, MACH IT Rotation Program — 2012–2014
Delivered four contracts resulting in $337,500 revenue.

The College of William & Mary, Williamsburg, VA, USA — 2010–2012
Researcher, Computational Science in the Mathematical Sciences — 2011–2012
Researcher, W&M Global Business Immersion — 2010–2011

Honors, Distinctions, and Awards

Duke University
- Summer Institute in Computational Social Science, Russell Sage Foundation and Alfred P. Sloan Foundation. June 2019.
- Departmental Fellowship, Department of Political Science: 2018, 2019.

The College of William & Mary
- Monroe Scholar: ranked in the top 5% of Class of 2012 admitted students. Awarded funding for summer research.
- Deans List: Fall 2011 & Spring 2012.

Languages

Mandarin Chinese (advanced), Spanish (advanced)

Skills

Synthesis of academic, technical, business, and strategic material to recommend action to varied groups of stakeholders

Quantitative analysis, machine learning, and experimentation methodology

Technical skills: Python, R, Matlab, T-SQL, LaTeX

Working Papers

McDade, Timothy, Multilateral Constraints on Chinese Behavior in South China Sea Territorial Disputes (March 10, 2020). Duke Global Working Paper Series No. 19. Available at SSRN: https://ssrn.com/abstract=3552183 or http://dx.doi.org/10.2139/ssrn.3552183

Bond Market Concentration and Constraints on Issuing Government Policy.

Invited Presentations

February 2020: UT Austin, Restraint and National Security Conference

Departmental Service

Duke University
Research Assistant, Professors Scott de Marchi and Erik Wibbels 2018 -

Professional Affiliations

American Political Science Association