

Benjamin Zhu

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Education

University of Pittsburgh, Pittsburgh, PA

May 2016

- B.A in Political Science, *Summa cum laude*
- Minors in Chemistry and Chinese

Work Experience

Valo Health

July 2021 – August 2022

Senior Data Scientist, Real World Evidence

- Used Pyspark to analyze electronic health record data to develop and implement a machine learning pipeline to generate insights in support of clinical trials
- Implemented a separate machine learning pipeline to process multi-omics data to generate insights on the mechanism of S1P1 and potential biomarkers related to post-myocardial infarction

New York University Wagner School of Public Policy

February 2019 – July 2021

Junior Research Scientist for Dean Sherry Glied

- Extracted, cleaned, transformed state and national level survey data exceeding millions of observations
- Investigated recent trends in healthcare spending patterns for diverse groups such as immigrants, diabetics, and others using assorted causal inference tools (regression discontinuity, difference-in-difference, etc)
- Provided data support to the Commonwealth Fund that served as the foundation for tens of yearly publications on healthcare system tracking and policy
- Designed a cost simulation to estimate potential COVID-19 related costs across states and payors
- Trained graduate students on statistical methods and programming

State University of Maringá, Maringá, Brazil

February 2018 – January 2019

Collaborator with Professor Ednaldo Ribeiro

- Investigated political behavior and culture of ethnic minorities, using factor analysis, qualitative interviews
 - Extracted, cleaned, Brazilian survey data
 - Focus on Asian-Brazilians

Department of Infectious Disease, University of Pittsburgh, Pittsburgh, PA

February 2017 – January 2018

Research Technician for Professors Minh-Hong Nguyen and Cornelius Clancy

- Investigated *candida* infections in transplant or otherwise immunocompromised patients
- Applied Random Amplification of Polymorphic DNA (RAPD) PCR techniques to develop a potential diagnostic tool for antimicrobial resistance screening in *candida* subspecies
- Provided logistical support for clinical trials, managed lab database, and performed molecular biology experiments

Hudson Institute, Washington, DC

March 2017 – September 2017

Political and Military Affairs Intern for Richard Weitz, Senior Fellow

- Wrote covering reports, conducted literature reviews, on topics such as ballistic missile defense systems in Eastern Europe and Northeast Asia, One Belt One Road, and nuclear proliferation in Northeast Asia
- Translated primary source documents from Chinese to English

Department of Cardiology, University of Pittsburgh, Pittsburgh, PA

September 2016 – February 2017

Research Assistant for Imad Al-Ghouleh

- Managed lab database, performed molecular biology experiments, and manipulated rodents
- Trained and supervised three undergraduates participating in the *First Experiences in Research* program

Department of Gastrointestinal Pathology, University of Pittsburgh, Pittsburgh, PA October 2012 – July 2016

Research Assistant for Professors Reetesh Pai and Changqing Ma

- Extracted, cleaned, and managed data from electronic medical records for 1000s of patients
- Designed and wrote excel workflows that were shared with other pathologists
- Organized and evaluated tissue blocks and slides

Roche Molecular Diagnostics, Pleasanton, CA

May 2013 – August 2013

- Conducted quality and regulatory experiments
- Investigated the relationship between frozen storage and clot rate in the cobas4800 platform

Department of Political Science, University of Pittsburgh, Pittsburgh, PA

January 2013 – May 2015

Research Assistant for Professor Pierre Landry

- Used remote sensing data to study development in China
- Designed a regression model of malaria incidence and vegetation density in Brazil

Peer Reviewed Publications

Zhu, B., Okado, L., & Ribeiro, E. (2021). The Political Culture of Asian Brazilians, *Politica e Sociedade*, 24(49), 198-213.

Landau, M. A., Zhu, B., Akwuole, F. N., & Pai, R. K. (2019). Histopathological predictors of recurrence in stage III colon cancer: reappraisal of tumor deposits and tumor budding using AJCC8 criteria. *International journal of surgical pathology*, 27(2), 147-158.

Landau, M. A., Zhu, B., Akwuole, F. N., & Pai, R. K. (2018). Site-specific Differences in Colonic Adenocarcinoma. *The American journal of surgical pathology*, 42(3), 351-358.

Kermanshahi, T. R., Magge, D., Choudry, H., Ramalingam, L., Zhu, B., Pingpank, J., ... & Zureikat, A. (2017). Mucinous and signet ring cell differentiation affect patterns of metastasis in colorectal carcinoma and influence survival. *International journal of surgical pathology*, 25(2), 108-117.

Ma, C., Patel, K., Singhi, A. D., Ren, B., Zhu, B., Shaikh, F., & Sun, W. (2016). Programmed death-ligand 1 expression is common in gastric cancer associated with Epstein-Barr virus or microsatellite instability. *The American journal of surgical pathology*, 40(11), 1496-1506.

Ren, B., Patel, K., Shaikh, F., Zhu, B., Sun, W., Singhi, A., & Ma, C. (2016). Programmed Death Ligand-1 (PD-L1) Expression in Mismatch Repair Deficient Gastric Tumors and Gastric Tumors Positive for Epstein-Barr Virus. *Laboratory Investigation* 96(2), pp, 195A-195A.

Davison, J. M., Choudry, H. A., Pingpank, J. F., Ahrendt, S. A., Holtzman, M. P., Zureikat, A. H., ... & Bartlett, D. L. (2014). Clinicopathologic and molecular analysis of disseminated appendiceal mucinous neoplasms: identification of factors predicting survival and proposed criteria for a three-tiered assessment of tumor grade. *Modern Pathology*, 27(11), 1521.

Other Publications

Sherry A. Glied and Benjamin Zhu, “Not So Sweet: Insulin Affordability over Time” (Commonwealth Fund, Sep. 2020).

Sherry Glied, Benjamin Zhu, Ougni Chakraborty, Aggie Tang "Who Will Pay for COVID-19 Hospital Care: Looking at Payers Across States," *To the Point* (blog), Commonwealth Fund, Aug. 18, 2020. <https://doi.org/10.26099/zbg2-0w57>

Sherry A. Glied and Benjamin Zhu, *Catastrophic Out-of-Pocket Health Care Costs: A Problem Mainly for Middle-Income Americans with Employer Coverage* (Commonwealth Fund, Apr. 2020). <https://doi.org/10.26099/x0cx-cp48>

Sherry Glied and Benjamin Zhu, “The Unintended Consequence of Requiring Immigrants to Meet ‘Reasonably Foreseeable’ Medical Costs,” *To the Point* (blog), Commonwealth Fund, Jan. 31, 2019. <https://doi.org/10.26099/gh27-c426>

Conference Presentations

Zhu, Benjamin and Glied, Sherry (2021, June) *Racial Disparities in the Content of Primary Care Visits, 2006-2016*. Poster presentation at Academy Health Annual Research Meeting

Zhu, Benjamin, (2018, September). *A Regression Model of Learner Interest and Language Acquisition*. Paper presented at the VIII Latin American Congress for the Formation of Language Teachers (CLAFPL)

Teaching Experience

Fulbright English Teaching Assistant, Londrina, PR, Brazil

Spring 2018 – Fall 2018

- Assist in second year oral production classes and business English I, II, and III classes in the English and Executive Secretary departments at the State University of Londrina as a 2018 Fulbright scholar
- Served as a founding consultant in the “Academic Writing Support Program,” the second official English-language Writing Center to exist in Brazil
- Lead extra-curricular initiatives including a current events club, an R club and a campus-wide TEDx event
- Taught a mini-course on statistics for education evaluation

American Red Cross, San Francisco, CA and Pittsburgh, PA

June 2010 – July 2016

Health and Safety Instructor

- Taught CPR, first aid, and disaster preparedness courses for community organizations and businesses
- Provided support at large events such as Bay to Breakers
- Mentored high school students as part of the Leadership Development Center

Volunteer Experience

Congregation Beit Simchat Torah, New York, NY

September 2019 – July 2021

Immigration Legal Clinic Volunteer

- Interpret for Spanish, Chinese, and Portuguese speaking asylees
- Assist with preparing asylum applications, supporting documentation, and other forms
 - Successfully supported 5 asylees who were eventually granted asylum
 - Advocated for 4 asylees to obtain pro-bono representation for their cases
- Accompany people facing deportation to immigration hearings and ICE check-ins

SALUD at the Birmingham Free Clinic, Pittsburgh, PA**March 2015 – January 2018***Spanish and Chinese Interpreter***August 2022 – Present**

- Took patient vitals, performed initial screening, briefed physicians and other clinicians about patient needs, and interpreted for Spanish and Chinese speaking patients

University of Pittsburgh Medical Centre, Pittsburgh, PA**October 2014 – May 2016***Healing Notes Co-Founder and Recruiter*

- Recruited and auditioned people to perform in UPMC hospitals
- Performed violin at UPMC Shadyside
- Assisted in new recruits navigate hospital bureaucracy including obtaining needed clearances and vaccines

Pitt Political Review, Pittsburgh, PA**September 2013 – May 2016***Senior Editor/Writer*

- Managed over 15 teams of writers and editors and oversaw the publication of 3 editions

University of Pittsburgh Honors College, Pittsburgh, PA**September 2014 – May 2016***Honors College Ambassador and Mentor*

- Assisted in coordinating orientation week activities for incoming freshmen
- Provided personalized mentorship to two students.

Honors / Awards

Fulbright U.S. Student Program, Londrina, Brazil**February 2018 – November 2018****Phi Beta Kappa Academic Honor Society****April 2015**

- Edwin Montgomery Phi Beta Kappa Junior Prize
 - Awarded to the member of the third-year class that best exemplifies the values of Phi Beta Kappa

University Scholar**April 2015**

- Awarded to the top two percent of undergraduate juniors, seniors, and members of undergraduate graduation classes from the past year

University of Pittsburgh Honors College Tuition Scholarship**2012 - 2016**

Skills/Languages

Full professional fluency in Portuguese (C2) , Mandarin Chinese (B2), and Spanish (C1)
Elementary proficiency in Russian (A2)

Programming Languages: R, Pyspark, Python

Software: Git, SQL, Stata, qGIS, ArcGIS