

XINLEI DENG

SUMMARY

I am a Ph.D. Candidate in Department of **Environmental Health Sciences**, University at Albany, State University of New York, advised by Prof. Shao Lin. My research interest focuses on the application of **remote sensing** techniques, **geospatial analysis**, and **machine learning** methods in public health. For Implementation Sciences, I prefer building **online predictive models** for practical application. I worked as research project assistant with **3 years of experience offering statistical analysis** and expertise in various study design including **cohort, case control, case crossover, and time series**. My Ph.D. thesis is to assess the short-term association between meteorological factors and emergency department visits for mental disorders by using **high-resolution weather simulations**. I obtained my bachelor's degree in **public health and medicine** in Sun Yat-sen University in 2019. My thesis entitled "*Time series clustering analysis on the epidemiological characteristics of notifiable infectious diseases in China*" was awarded the Outstanding Thesis. I have a strong background in **medicine, biostatistics, epidemiology**.

EXPERIENCE

Research Project Assistant, 07/2019 - Current

The Research Foundation of State University of New York- Albany, NY

- Worked as **project coordinator** for several grants.
- Used advanced analytical approaches including **machine learning models** to evaluate health risk factors.
- Develop spatial modeling with **R, Python and ArcGIS**.
- Built predictive models and deployed them as **web-based** tools.
- Manage **big electronic hospital data** with **SAS**
- Applied Coxph, DLNM and case crossover design to solving problems in public health and clinical research.

Teaching Assistant, 05/2021 - 08/2021

The Research Foundation of State University of New York- Albany, NY

- Provided one-on-one assistance and tutoring to clinicians requiring additional help.
- Helped clinicians master learning concepts through one-on-one and small group tutoring.
- Helped professors with material generation, lesson plan development, class preparation, scheduling, exam distribution and student mentoring.

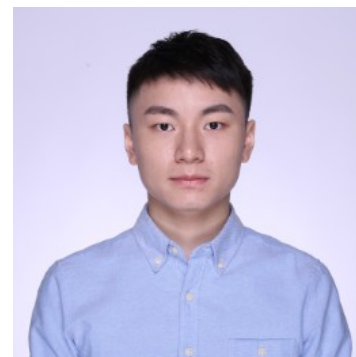
Biostatistics Scientist Intern, 01/2019 - 06/2019

Changsha Duxact Biotech Co., Ltd

- Drafted statistical sections of study protocols outlining information such as rationale, objectives, design and methodology.
- Prepared datasets using **SAS**.
- Prepared statistical analysis plan and report.

Data Management Intern, 02/2018 - 03/2018

Hunan BRI Medicine Co., Ltd. - Hunan



CONTACT

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Website: <https://xinleideng.github.io/>

SKILLS

- **Python, R, SAS, ArcGIS, SPSS, SQL,** Photoshop, STATA, Matlab
 - **Developed online tools:**
xdeng3.shinyapps.io/NIPM/
xdeng3.shinyapps.io/CHD_model/
xdeng3.shinyapps.io/COVID-19/
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ACADEMIC SERVICES

- Served as **reviewer** for **Indoor Air, Health and Place, & BioMed Research International** journals.
- Served as **moderator** at the American Public Health Association (APHA) conference for **Big Data Analytics for Public Health Research** session 2021
- Served as **The Nation's Health Board Representative (Chair)** for APHA - Student Assembly 2021

HONORS

- George Scholarship 2021
- Registration award at 2021 ISEE conference
- **Student and New Researcher Network (SNRN) Award** at 2020 ISEE conference.
- **The Health Research, Inc. David Axelrod Award 2020**

- Detected and resolved data quality issues and discrepancies for integrity and quality control.
- Devised reports and visualizations to present requested data in sleek format.

Intern Doctor, 09/2017 - 01/2019

Kaiping Central Hospital - Kaiping

Third Affiliated Hospital, Sun Yat-sen University - Guangzhou

Sixth Affiliated Hospital of Sun Yat-sen University - Guangzhou

Hailong Street Community Healthcare Service Center - Guangzhou

Yiyang Central Hospital - Hunan

- Recorded patients' medical history, vital statistics and test results in electronic medical records. Facilitated patient check-ins and check-outs.
- Prepared patients for specific treatments.
- Monitored patients with acute conditions for changes, improvements or need for intervention.

PUBLICATIONS

- Sheridan SC, Zhang W, **Deng X**, Lin S. The individual and synergistic impacts of windstorms and power outages on injury ED visits in New York State. *Sci Total Environ.* 2021;797:149199.
- Hu K, **Deng X**, et al. Development and validation of a predictive model for feeding intolerance in intensive care unit patients with sepsis. *Saudi J Gastroenterol Off J Saudi Gastroenterol Assoc.* Published online 2021.
- Zhang T, Zhang G, **Deng X**, et al. APS (Age, Platelets, 2D Shear-Wave Elastography) Score Predicts Hepatocellular Carcinoma in Chronic Hepatitis B. *Radiology.* Published online 2021:204700.
- **Deng X**, Zhang W, et al. Short-term risk effects of exposure to ultrafine particles on emergency department visits of renal diseases in New York State, 2013-2017. *ISEE Conf Abstr.* 2021;2021(1). doi:10.1289/ISEE.2021.O-TO-127
- Qu Y, Zhang W, Ryan I, **Deng X**, et al. Ambient extreme heat exposure in summer and transitional months and emergency department visits and hospital admissions due to pregnancy complications. *Sci Total Environ.* 2021;777:146134. doi:10.1016/j.scitotenv.2021.146134
- Lin S, **Deng X**, et al. COVID-19 Symptoms and Deaths Among Health Care Workers in the United States. Published online 2021.
- **Deng X**, Thurston G, Zhang W, et al. Application of data science methods to identify school and home risk factors for asthma and allergy-related symptoms among children in New York. *Sci Total Environ.* 2021;770. doi:10.1016/J.SCITOTENV.2020.144746
- Guo J, Wu Y, **Deng X**, et al. Association between social determinants of health and direct economic burden on middle-aged and elderly individuals living with diabetes in China. *PLoS One.* 2021;16(4):e0250200. doi:10.1371/JOURNAL.PONE.0250200
- Ye B, Zhang W, **Deng X**, et al. Impacts of environmental policies on students' test scores mediating by school attendance rate. *ISEE Conf Abstr.* 2020;2020(1). doi:10.1289/ISEE.2020.VIRTUAL.P-1249
- **Deng X**, Brotzge J, Zhang W, et al. Assessing the association between meteorological factors and mental disorders in summer using Mesonet, a refined weather monitoring system, in New York State. *ISEE Conf Abstr.* 2020;2020(1). doi:10.1289/ISEE.2020.VIRTUAL.P-0334
- **Deng X**, Zhang W, Lin S. Package 'APML.' <https://cran.r-project.org/web/packages/APML/APML.pdf>. Published online 2020.

- **Honorable Mention** in American **Mathematical Contest in Modeling** 2018
- **First prize** at provincial level in China Undergraduate **Mathematical Contest in Modeling** 2017
- Outstanding Thesis Recipient in Sun Yat-sen University
- SYSU First Class Scholarship, SYSU Jerry Yan Scholarship, Scholarship of Zhibin Yao and Xiao Tan for Excellent Medical Students Recipient
- The Third Prize of the Sixth Medical Knowledge & Skills Contests

EDUCATION & TRAINING

Bachelor of Science in Medicine, Public Health, 06/2019

Sun Yat-sen University - Guangzhou, China

- Thesis: Time series clustering analysis on the epidemiological characteristics of notifiable infectious diseases in China
- 3.8/4 GPA

Ph.D., Environmental Health Sciences, Expected in 12/2022

SUNY At Albany - Albany, NY

- Full scholarship Recipient
- Travel award for conference
- 4.97/5 GPA

Certificate in Biostatistics, 08/2020

Peking University - Beijing, China

- Training in deep learning, adaptive design, dynamic treatment regime, missing imputation, stochastic epidemic model, and longitudinal data analysis.

- Cai Y, Gong W, He H, Hughes J, Simoni J, Xiao S, Gloyd S, Lin M, **Deng X**, et al. Mobile texting and lay health supporters to improve schizophrenia care in a resource-poor community in rural China (LEAN Trial): Randomized controlled trial extended implementation. *J Med Internet Res*. 2020;22(12). doi:10.2196/22631
- Wang T, Xu D, Fan Q, Rong W, Zheng J, Gao C, Li G, Zeng N, Guo T, Zeng L, Wang F, Xiao C, Cai L, Tang S, **Deng X**, et al. 1,2-Dichloroethane impairs glucose and lipid homeostasis in the livers of NIH Swiss mice. *Toxicology*. 2017;380:38-49. doi:10.1016/J.TOX.2017.02.005