

# Kaike Ping

Github: <https://github.com/KaikePing>

Email : pkk@vt.edu

## EDUCATION

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- **Virginia Tech** Blacksburg, VA  
*PhD Student in Computer Science; Advisor: Eugenia Rho* Aug 2022 - Present
- **Southern Medical University** Guangzhou, China  
*Master of Medicine in Biostatistics; Advisor: Pingyan Chen* Sep 2014 - Jul 2017  
*Bachelor of Science in Applied Statistics* Sep 2010 - Jul 2014

## EXPERIENCE

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- **Virginia Tech** Blacksburg, VA  
*PhD Student* Aug 2022 - Present
  - **Research topic:** Interdisciplinary research on natural language processing and social science applications
    - Conducting systematic and statistical analysis of the linguistic characteristics and strategies of online counter responses across various contexts, topics, and levels of hate speeches
    - Developing and evaluating an interactive visual user interface system that leverages linguistic artificial intelligence to help users craft effective online counter responses to hate speeches
- **Guizhou Center for Disease Control and Prevention** Guiyang, China  
*Assistant Research Fellow* Nov 2019 - Jul 2022
  - **Epidemic Surveillance:** Collected and analyzed weekly epidemic surveillance data on COVID-19, unexplained pneumonia, and avian influenza for over 3.8 million people to monitor their intensity, detect transmission changes, and measure their impacts on hospitalizations and deaths
  - **Pandemic Risk Assessment:** Assessed the risks of possible pandemic outbreaks using data-driven models and scenarios and determined the appropriate public health response level and steps for different regions and populations
  - **Field Epidemiology:** Conducted field epidemiological investigations on over 100 cases of COVID-19, flu, avian influenza, and chickenpox to trace and test over 1000 contacts and control transmissions
  - **Epidemic Modeling:** Analyzed epidemiologic characteristics of various epidemics using statistical or computer simulation models to unravel transmission dynamics and evaluate intervention strategies
  - **Health Education:** Hosted over 5 health education and assessment workshops and activities on COVID-19 prevention for various groups and settings
- **Contract Research Organization of CLT Inc** Guangzhou, China  
*Software Engineer* Jul 2017 - Jun 2019
  - **Web Development:** Served as the chief programmer for the Central Randomization System and Electronic Data Capture System using web development technologies such as HTML, CSS, JavaScript, PHP, and MySQL
  - **Central Randomization System:** Developed the Central Randomization System, a web-based application used in over 20 multi-center clinical trials, to implement drug management, user management, and algorithms for allocation concealment
  - **Electronic Data Capture System:** Created the Electronic Data Capture System, a web-based SaaS that stored patient data collected in clinical trials, to increase real-time access to data and decrease time spent on query management
- **National Clinical Research Center for Kidney Disease** Guangzhou, China  
*Research Intern* Nov 2015 - Feb 2017
  - **Cohort Study Development:** Deployed a web-based application for a cohort study of chronic kidney disease patients
  - **Case Report Form Design:** Participated in the design of case report forms for data collection and management for the cohort study

## TEACHING AND SERVICES

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- **Virginia Tech** Blacksburg, VA  
*Teaching assistant*
  - **CS2104:** Intro to Problem Solving in CS
  - **CS3754:** Cloud Software Development
  - **CS5024:** Ethics & Professionalism in CS
- **Guizhou Center for Disease Control and Prevention** Guiyang, China  
*Master Thesis Reviewer* Spring 2021 & 2022
  - Reviewed and provided feedback on master theses on topics related to biostatistics
- **Southern Medical University** Guangzhou, China  
*Instructor* Fall 2015 & 2016

- **SPSS Application (master course):** Responsible for delivering 50% lectures and designing the final exam
- **Biostatistics (undergraduate course):** Responsible for delivering 30% lectures, designing two assignments and the final exam

PhD Thesis Reviewer

Spring 2015 & 2016

- Reviewed and provided feedback on the statistical sections of PhD theses

## HONORS AND AWARDS

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- Oct 2021: COVID-19 Experts Committee Member of Guizhou Province, China
- Sep 2020: Consortium author of Preterm Birth Prediction Challenge in Cell Rep Med
- Oct 2015: Silver medal, the 13th Challenge Cup Competition of Science Achievement in China
- Jul 2014: Best Poster Award, China Biostatistics Conference 2014
- Dec 2012: Southern Medical University Third-Class Scholarship for excellent students
- Dec 2011: Southern Medical University Academic Scholarship for excellent students
- May 2011: Honorable Mention, the 9th ACM-ICPC Guangdong Collegiate Programming Contest
- Dec 2009: Second Prize, National Olympiad in Informatics Provincial (NOIP) 2009

## SKILLS SUMMARY

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- **Data science skills:** Data collection, cleaning, analysis, visualization, and modeling
- **Programming languages:** Python, R, Java, SQL, PyTorch, HuggingFace
- **Web development skills:** HTML, CSS, JavaScript, PHP, MySQL, web accessibility
- **Biostatistics and epidemiology skills:** Public health concepts and methods

## SELECTED RESEARCH PUBLICATIONS

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- [1] **Ping, Kaike**, Anisha Kumar, Xiaohan Ding, and Eugenia Rho. “Behind the Counter: Exploring the Motivations and Barriers of Online Counterspeech Writing and the Potential for AI-Mediated Assistance”. In: *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. 2023, (under review).
- [2] **Ping, Kaike**, Mingyu Lei, Yun Gou, Zhongfa Tao, Guanghai Yao, Can Hu, Qin Tao, Zhiting Zou, Dingming Wang, Shijun Li, and Yan Huang. “Epidemiologic Characteristics of COVID-19 in Guizhou Province, China”. In: *The Journal of Infection in Developing Countries* 15.03 (Mar. 31, 2021), pp. 389–397. ISSN: 1972-2680. DOI: 10.3855/jidc.12818.
- [3] **Ping, Kaike**, Lei Mingyu, Gou Yun, Tao Zhongfa, Liu Zhaobing, Yao Guanghai, Hu Can, Zou Zhiting, Wang Dingming, Li Shijun, and Huang Yan. “Epidemiological characteristics of coronavirus disease 2019 in Guizhou, 2020”. In: *Disease Surveillance* 36.6 (June 30, 2021), pp. 581–586. ISSN: 1003-9961. DOI: 10.3784/jbjc.202103100109.
- [4] Yun Gou, **Ping, Kaike**, Mingyu Lei, Chun Yu, Ying Tao, Can Hu, Zhongfa Tao, Zhiting Zou, Weijia Jiang, Shijun Li, Li Zhuang, Zhaobin Liu, and Yan Huang. “Initial Clinical Characteristics of 146 Patients with COVID-19 Reported in Guizhou Province, China: A Survival Analysis”. In: *The Journal of Infection in Developing Countries* 16.01 (Jan. 31, 2022), pp. 32–40. ISSN: 1972-2680. DOI: 10.3855/jidc.15027.
- [5] Chongyang Duan, Yingshu Cao, Yong Liu, Lizhi Zhou, **Ping, Kaike**, Ming T. Tan, Ning Tan, Jiyan Chen, and Pingyan Chen. “A New Preprocedure Risk Score for Predicting Contrast-Induced Acute Kidney Injury”. In: *Canadian Journal of Cardiology* 33.6 (June 1, 2017), pp. 714–723. ISSN: 0828-282X. DOI: 10.1016/j.cjca.2017.01.015.
- [6] Ji Qi, Shaoqun Zhang, Lei Zhang, Ruiyue Ping, **Ping, Kaike**, Da Ye, Honggui Shen, Yili Chen, and Yikai Li. “Uniaxial Tensile Properties of Atherosclerotic Carotid Artery After Mobilization of Pushing on Qiao-Gong: A Safety Study Using an Animal Model of Carotid Atherosclerosis”. In: *Journal of Manipulative and Physiological Therapeutics* 41.2 (Feb. 1, 2018), pp. 164–173. ISSN: 0161-4754. DOI: 10.1016/j.jmpt.2017.12.002.
- [7] Shaoqun Zhang, Ji Qi, Lei Zhang, Chao Chen, Shubhro Mondal, **Ping, Kaike**, Yili Chen, and Yikai Li. “Cervical Rotatory Manipulation Decreases Uniaxial Tensile Properties of Rabbit Atherosclerotic Internal Carotid Artery”. In: *Evidence-Based Complementary and Alternative Medicine* 2017 (Feb. 16, 2017), e5189356. ISSN: 1741-427X. DOI: 10.1155/2017/5189356.
- [8] Jiao Huang, Liying Wang, Chun Yu, Zhaobing Liu, Guanghong Yang, Ziyao Lan, Zhongfa Tao, **Ping, Kaike**, He Huang, Shijun Li, and Yan Huang. “Response and Assessment of the Effectiveness of the Countermeasures for a COVID-19 Outbreak — Guizhou Province, China, March 2022”. In: *China CDC Weekly* 4.30 (July 29, 2022), pp. 655–659. ISSN: 2096-7071. DOI: 10.46234/ccdcw2022.141.