

## Shangzi GAO

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### EDUCATION

#### Northeast Normal University

Changchun, China

##### BSc in Computer Science and Technology

Sep. 2018 – June 2022

- Core modules: Advanced Mathematics, Probability and Mathematical Statistics, General Physics, Discrete Mathematics, C Language Programming, Computer Composition Principle, Algorithm and Data Structure, Operating System Principle, Computer Network, Principle of Compiler

#### University of California, Los Angeles

Los Angeles, USA

##### Summer School

July 2019 – Aug. 2019

- Core modules: Interactive Immersion Design, Fundamentals of Game Design, C#

### WORK EXPERIENCE

#### Chinese Institute for Brain Research

Beijing, China

##### Lab Technician

June 2022 – June 2024

- Prepared for experiments on animal behaviors, including set-up of lab table and pre-test behavior training to ensure the quality of data
- Extracted coordinates information from experiment videos with DeepLabCut and filtered audio information with Fourier Transform
- Cleaned more than 30 thousand rows of data from 100+ datasets covering 54 dimensionalities by methods of clustering and binning and smoothed data with moving average
- Applied both manual algorithms and machine learning algorithms such as Logistic Regression and Random Forest to the classification of animal behaviors based on intent after processing the data with PCA, providing a solid foundation for the prediction of animal behaviors

### INTERNSHIP EXPERIENCE

#### Dezhou Center for Disease Prevention and Control

Dezhou, China

##### Epidemic Analysis Intern

June 2021 – Sep. 2021

- Used data tools including Excel and Python to cross-check the CDC database with statistics reported by communities, and timely informed more than 10 thousand residents in 18 urban and suburban communities of information on vaccines and tests
- Organized both online and offline propaganda on COVID-19 prevention, especially in areas with high population mobility such as railway stations

#### The Second People's Hospital of Dezhou

Dezhou, China

##### Clinical Research Intern

Jan. 2020 – July 2020

- Collected accurately the basic information including age, gender and cancer conditions of 90 clinical chemo research volunteers suffering from breast cancer
- Followed up on the treatment effects and patient conditions and provided preliminary justifications and background information for the biostatisticians

#### Dezhou Kangrui Medical Device Co., Ltd.

Dezhou, China

##### Risk Assessment Intern

Dec. 2018 – Mar. 2019

- Collected doctors' feedback on medical devices from questionnaires or face-to-face sessions to understand potential risks and estimate the incidence of adverse events
- Researched reported adverse events and relevant literature to identify the causes of dangerous situations and assessed the level of severity with risk assessment tools
- Conducted comprehensive return-risk analysis of devices according to risk matrix to ascertain the applicability and safety of products and to provide insights into product optimization

### PROJECT EXPERIENCE

#### Python-based COVID-19 Data Visualization and Analytics Tools COVID-19

Sep. 2021 – June 2022

- Adopted crawler technologies to collect nationwide COVID-19 data, and visualized data results with descriptive statistics
- Structured regression models to examine the effects of various factors on infection rate, cure rate and mortality rate with statistical inference and hypothesis test
- Built a data visualization platform with a combined use of Python, Flask and ECharts

### OTHER INFORMATION

- Language skills: Chinese (native), English (fluent), French (familiar)
- Computer skills: Microsoft Office Suite, Photoshop, C, C++, C#, JAVA, HTML, CSS, SQL, MYSQL, PHP, Python (NumPy, Pandas, SciPy, Matplotlib)
- Publications: Brief on the Latest Research on Gastric Retenting Floating Drug Delivery System (2018), Preliminary Analysis on How to Improve Basic Clinical Laboratory Technologies (2017)
- Invented Patents: An AI-based Environmental Control System and Methods in 3D Printing (2021), An AI-based Temperature Control System in 3D Printing (2021)
- Other Projects: Project with China Association for Science and Technology – “A City of Knowledge” —An Integrated Platform of Learning Resources Based on Knowledge Logic Framework (2021)