

Ke Xu

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EDUCATION (DUAL DEGREE PROGRAM)

University of Illinois at Urbana-Champaign (UIUC)

Champaign, IL, USA

Bachelor of Science in Electrical Engineering

Sept. 2019 – Jun. 2023 (Expected)

- Cumulative GPA: 3.72 / 4.0

Zhejiang University (ZJU)

Hangzhou, Zhejiang, China

Bachelor of Engineering in Electrical Engineering and its Automation

Sept. 2019 – Jun. 2023 (Expected)

- Cumulative GPA: 3.89 / 4.0

RESEARCH EXPERIENCE

Natural Language Processing: Open Domain Long-Range Dialogue

Hangzhou, Zhejiang, China

Student Summer Research Internship | Advisor: Dr. Zhenzhong Lan, Westlake University [\[Link\]](#)

Jul. 2021 - Aug. 2021

- Developed an AI-assisted chatbot to provide psychological counseling with colleagues, proposed better classification methods and wrote **Python** program to evaluate the deviation between different data annotators
- Researched on the effectiveness of multi-labeling to reduce the subjectivity of data annotators and alleviate overfittings
- Explored conversation safety and offense problem in language models with **Python**

Machine Learning: Single-Cell Annotation

Haining, Zhejiang, China

ECE 449 Course Project | Advisor: Prof. Zuozhu Liu, Zhejiang University [\[Link\]](#)

Sep. 2021 – Dec. 2021

- Reproduced the unsupervised model “scETM” with **PyTorch**, which learns an encoder network to infer cell type mixture and a set of highly interpretable gene embeddings, topic embeddings and batch-effect linear intercepts from RNA-seq datasets

INTERNSHIP EXPERIENCE

Worldshaper Academy

Hangzhou, Zhejiang, China

Academic Advisor & Engineer Intern | Manager: Peter W. Yang

Sep. 2019 - Aug. 2020

- Collaborated with colleagues to develop, assemble and test Mars Rover using **micro:bit**, wrote code in **C++** and **Python**
- Instructed participants in High School Mathematical Contest in Modeling (HiMCM) to model with **Python** and **MATLAB**

SELECTED HONORS & AWARDS

- Mathematical Contest in Modeling (MCM) 2021, Meritorious Winner Prize (Top 7% among 10,053 teams)
- 4th National College Contest in Big Data Analysis and Mining, Second Prize (Undergraduate and Graduate Level)
- Zhejiang University Scholarship, Third Prize: 2019-20, 2020-21
- ZJU-UIUC Institute Dean's List: 2019-20, 2020-21

TEACHING EXPERIENCE

Teaching Assistant of PHYS 212: Elec & Mag

Haining, Zhejiang, China

Instructor: Prof. Penkov Oleksiy [\[Link\]](#) Dr. Huanxin Xia, Zhejiang University

Fall 2021 Semester

- Graded pre-labs, labs carefully for more than two hundred students, and strictly maintained academic integrity

EXTRA-CURRICULAR ACTIVITIES

Modeling of Fighting Wildfires & Necessary Number and Distribution of Drones

Hangzhou, Zhejiang, China

Mathematical Contest in Modeling (MCM) | Advisor: Prof. Klaus-Dieter Schewe, Zhejiang University [\[Link\]](#)

Feb. 2021

- Modeled the distribution of wildfire in Australia with **MATLAB** based on the dataset provided by NASA and open sourced on **Kaggle** containing latitude, longitude and fire radiative power and realized data visualization through heatmaps
- Predicted the spread of wildfire based on Topographic datasets and Fading Model with **Python**

Analysis of User Portrait and Location of Logistics Distribution Center

Haining, Zhejiang, China

National College Contest in Big Data Analysis and Mining | Advisor: Prof. Hongwei Wang, Zhejiang University [\[Link\]](#)

Dec. 2020

- Utilized a sequential neural network built by **Keras** to predict demand for specific goods in different locations
- Proposed our model to locate logistics distribution station based on **Particle Swarm Optimization** and **Baumol-Wolfe model**

ADDITIONAL INFORMATION

- Programming Skills: C, C++, Python, HTML, MATLAB, LaTeX, SystemVerilog
- Language: Mandarin Chinese (Native), English (Fluent)
- Relevant Coursework: Data Science & Engineering, Data Structure, Machine Learning & AI, Algorithms & Models of Computing, Calculus, Probability & Statistics, Differential Equations, Linear Algebra, Discrete Mathematics