CHING-WEN WANG

215 N. Frances St. Madison, WI, 53703 · (312) 307-2291 · jasminewang6026@gmail.com

EDUCATION

University of Wisconsin - Madison Wisconsin, U.S.
Bachelor of Science in Statistics, Minor in Computer Science; GPA 3.8/4.0 May 2021

Selected Coursework: Stochastic Processes, Time Series Analysis, AI, Machine Learning, Deep Learning, Programming (Java, Python), Optimization, UX Design, Regression Analysis, Nonparametric Statistics, Microeconomics, Macroeconomics
Portfolio: jasminewang553.github.io/Ching-Wen-Jasmine-s-Portfolio/
Honors: 4 semesters in Dean's List

PROFESSIONAL EXPERIENCE

UW-Madison Skunkworks Informatics Wisconsin, U.S.
Undergraduate Research Assistant Jan 2021 - Present

Apply cutting-edge data science and natural language processing (NLP) techniques in material science

- Build and run a systematic framework in Python for extracting chemical properties from research papers published in material science, persist extracted structured data in SQL database for researchers' further use
- Construct rule-based parsers to extract bulk modulus information of various chemical entities from the corpus
- Modify ChemDataExtractor, a state-of-art NLP method in chemistry, to enhance the performance and accuracy of the process
- Lead group of 6 students in completing weekly goals and facilitate communication between group members

UW-Madison Department of Life Sciences Communication Wisconsin, U.S.
Undergraduate Research Analyst Sept - Dec 2019

Empirical and quantitative analytics in political science

- Investigated data to assist Professor Kaiping Chen in composing a proposal for the United Nation's Voice of the Hungry project organized by the Food and Agriculture Organization
- Built data pipeline for wrangling materials from Gallup World Poll questionnaires; explored, organized, and analyzed cleaned data, e.g. summary statistics, correlation analysis, cohort studies in R; visualized analytical results for team's use

UW-Madison Richard A. Anderson Lab Wisconsin, U.S.
Undergraduate Lab Assistant Sept 2018 – Sept 2019

Technical support and daily financial operations

- Maintained and balanced budget (~ $1M in total) and built projection model for future lab expenditures based on historical data with lab financial manager using Excel and Python
- Optimized and systemized budget management process by organizing product orders into spreadsheets and checking on financial status with research scientists during weekly meetings

PROJECT EXPERIENCE

Covid-19 detection from X-ray images UW-Madison Course Final Project Feb – May 2021

- Built models in detecting Covid-19, lung opacity, viral pneumonia, and heathy lungs from chest X-rays with deep learning image classification models (CNN) e.g. AlexNet, VGG, ResNet, and compared results with a benchmark model (Logistic Regression)
- Evaluated models based on high recall rate in COVID-19 and viral pneumonia diagnosis
- Displayed images using GradCAM to visualize focus region of CNN model layers

Classification of Heart Failure Patients, UW Data Challenge Sept – Oct 2020

- Built a model to predict the death rate of heart failure patients given different heart conditions and chronic diseases of patients
- Won the best oral presentation award out of 30+ groups

Knowledge Graph Construction, UW-Madison Course Final Project Sept – Dec 2020

- Determined the best tool in constructing knowledge graph from real life texts from 3 different packages: spaCy, Stanford OpenIE, and Stanford Scene Graph Parser

ADDITIONAL INFORMATION

Computer: R, Python, SQL, Java, Microsoft Excel, PowerPoint, Natural Language Processing

Qualification: Financial Mathematics Exam Certification (Society of Actuaries)

Interest: Cooking, Piano, Reading