Yuren Sun

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EDUCATION

University of Wisconsin – Madison July 2018 - December 2021

Bachelor of Science, L&S Honors, Honors in Computer Sciences, 3.97/4.00

Majors: Computer Sciences, Economic, and Mathematics

Related Courses: Algorithm, Discrete Math, Combinatorics, Computer Graphics, Data Structures, Database, Linear Optimization, Machine Organization, Operating Systems, Stochastic Processe, UX design, Wearable Technology (I/P)

SKILLS: Python, C/C++, Java, HTML, CSS, JavaScript, React, SQL, Linux, Git, Tableau, Stata

WORK EXPERIENCES

Peer Mentor, University of Wisconsin – Madison, Madison, WI January 2021 – May 2021, September 2021 - Present

- Be the peer mentor for the CS537 - Introduction to Operating Systems for 2021 Spring semester and the peer mentor for CS571 - Building User Interfaces for 2021 Fall
- Hold office hours and answer questions online timely to mentor students in understanding concepts and help students on the projects coded with C in Linux environments for Comp Sci 537 and with JavaScript, HTML, CSS, and React for Comp Sci 571

Undergraduate Part Time Researcher, University of Wisconsin – Madison, Madison, WI January 2020 - Present

- Develop the pipeline to generate spectrograms of sounds, parse label information, and create the dataset of about 3800 instances for approximately 440 animals based on labeled recordings of the rainforests
- Utilize convolutional neural networks to classify the animals based on the frequencies, occurrence times, and spectrograms of their sounds with Python and TensorFlow and improve the performance of classifications with transfer learning and data augmentation
- Research on model performances on small datasets and the minimum number of samples required for ideal classification performance

Software Development Engineer Intern, Amazon Web Services, East Palo Alto, CA June 2021 – September 2021

- Designed and implemented a project for local reproductions on non-data dependent issues to improve debug abilities for Redshift
- Created catalog functions to extract names of tables and views from queries and trace down dependencies of views with C
- Developed the pipeline to retrieve the data definition languages (DDLs) from query texts with automatic dependency tracking
- Developed broad tests on catalog functions and the whole project for the feasibility of functionalities and coverages of edge cases

Innovations Intern, American Family Insurance, Madison, WI May 2020- August 2020

- Developed the prototypes and the minimum viable products (MVPs) with HTML, JavaScript, and CSS
- Designed, implemented, and refined the user interface based on the target customers to fulfil the requirements from the customers
- Deployed the prototypes and the MVPs with serverless web applications for user data collections with Amazon Web Services (AWS)
- Managed AWS resources with Terraform to enhance the workflow and automated the source code delivery with CI/CD pipelines

SELECTED PROJECTS

Mechanism Design For Pricing And Refund Strategy January 2021 - Present

- Research on the implementation of option menus to maximize the revenue for simple and randomized pricing and refund stretegy
- Compare the optimized revenue of simple and randomized pricing and refund mechanism with that of general augmented auctions for multi-item mechanism

Page Replacement Simulator November 2020 - December 2020

- Read the trace files with over 10 million traces, created the process table as hash table, and simulate the scheduling process of the traces with linked lists and hash tables with C in Linux environment
- Simulated the page replacement process with FIFO, LRU and Clock algorithms and kept track of various performance statistics

Automatic Feature Extraction from Acoustic Recordings to Detect Events of Interest May 2019 - July 2019

- Detected features from long-term acoustic recordings obtained in Singapore water through isolating out outlier sounds in spectrograms by envelope-based methods with Python
- Processed acoustic data that are around 40 minutes and extracted features with the low sound-to-noise ratio around -5 to 0 dB