Ken(Xingyu) Ming

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Education

University of Illinois Urbana-Champaign **August 2021 – present**
Master of Electrical and Computer Engineering *Urbana, IL*

Shanghai Jiao Tong University **September 2017 – August 2021**
Bachelor of Engineering in Electrical and Computer Engineering, Minor in Entrepreneurship *Shanghai, China*

Relevant Coursework: Data Structures and Algorithms, Computer Organization, Computer Networks, Machine Learning, Cryptography, AI techniques, Database System, Distributed System, Web Programming

Awards:

- Excellent Graduates of SJTU (August 2021)
- Undergraduate Excellent Scholarship (November 2020)
- Merit Student, SJTU (October 2020)
- Second Prize, CUMCM (October 2018)

Experience

Shanghai Gengyuan Education Technology Co. **March 2021 – May 2021**
Software Engineer Intern *Shanghai, China*

- Designed and programmed a smart car which can change its color according to its surroundings based on Arduino
- Completed the code for calibration and color detection for the color sensors and assembled the car
- Studied the code of JPL's open-source Mars-Rover on Github and assembled the Mars-Rover

Pegasus Brigade **January 2019 – February 2019**
Investment Assistant *Shanghai, China*

- Collected income, click-through rate and volume of customer data, main events held according to the company's official homepage and social media platforms as well as reports, then analyzed the data with Matlab by applying calculation, regression and visualization
- Evaluated the marketing strategy of companies with similar operation mode based on the previous analysis
- Wrote the final reports about the marketing strategies which was used as reference for investment

Research and Projects

Acemap Project: Paper-X Ray **March 2019 – March 2020**
Group Member *Intelligent Internet of Things Lab, Shanghai Jiao Tong University*

- Used Python to download thousands of papers from top-tier conferences and updated the database with MySQL
- Collected the number of tables, figures and formulas on each page and saved the data into a .json file with Python as the data set for LightGBM
- Counted the number of pages of the main content of each paper, cut the paper into 6 pages, and combined the pages into a figure as input with Python as the standardized data set for Tensorflow
- Exploited Tensorflow and LightGBM as the machine learning models along with the previous data to train the model and test its performance
- Generalized the model to different conferences in different years and the final accuracy of our model was around 92%

Implementation of ARQ protocol in container networks **May 2021 – August 2021**
Group Leader *Computer Networks, Course Project*

- Configured and set up a overlay network based on Docker, etcd and flannel
- Configured a server and a client for Minecraft, gRPC-web, and IPTV on two Virtual Machines with Linux system
- Implemented the Stop-and-Wait ARQ protocol in C/C++ with socket in Linux and tested the protocol by sending a txt file from server to client with 10% loss

Stock Price Forecasting **October 2020**
Personal Project *AI technique, Course Project*

- Modified the data by discretization and dividing into current and past sets
- Implemented the dynamic Bayes network as a 1-order Markov chain with Python and based on PyAgrum
- Generalized the model into k-order Markov chain, ran the parameter and structure learning process and inferenced on the test data

Technical Skills

Languages: Python, R, C/C++, HTML/CSS, JavaScript, SQL, Assembly Language, Verilog HDL
Tools: Pycharm, JupyterNotebook, VS, Xcode, Matlab, Codepen, Vivado, Tensorflow, Gurobi, PyAgrum, Arduino
Technologies/Frameworks: Linux, MacOS, Windows, GitHub