Liu JinKua

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EDUCATION

Wenzhou-Kean University **Jun. 2018 to Jun. 2022**

B.S. in Computer Science, Minor in Mathematical Science

- GPA: 3.473/4.000
- Relevant Coursework: Machine Learning, Human Computer Interface, Software Development, Foundation of Data Analysis, Data visualization, Database management, Basic Psychology
- Honors: Twice Dean's List, Cum Laude, Best poster in 2021 student research day

PUBLICATION

Jinkua Liu, Chenxiang Yang and Hemn Barzan Abdalla (2022), "Enhanced style transfer with colorization and super-resolution" Accepted by Conference on Communication, Image and Signal Processing (CCISP 2022). IEEE.

EXPERIENCE

Job: Graduate Education Research Assistant, Wenzhou-Kean University **August 2022 to present**

Content: Assist professors and graduate students with research activities, conference convening, graduate courses registration and graduated admissions.

Project: Comparison of Game Reinforcement Learning in Reliability **In Progress**

Team Member|Advisor: Omar DIB

Content: Compare and contrast the various parameters of three different types of popular reinforcement learning (value-based, policy-based, and actor critic) in terms of their reliability by analyzing reward, trend, and design metrics. Based on the results, the strengths and weaknesses of the algorithms are analyzed.

Contest: COMAP MCM **Feb 2022**

Team member | Advisor: Puneet Rana

Content: Gold and Bitcoin investments are modeled by using a multi-period Markowitz model and a GM(1,1) gray prediction model. By using GM(1,1) and neural networks, the maximum return on investment is predicted for 5 years after integrating data from both assets based on trading time, with a trade-off between time complexity and accuracy. And by building a multi-period Markowitz model, the 5-year investment time is divided into multiple sub-transaction periods and the effect of transaction cost is added to it.

Project: AR Storyteller for ASD kids **Sept to Dec 2021**

Team member | Advisor: Tiffany Tang

Contents: An application was developed for children with autism to interact with patients in the form of storytelling and to train their cognitive skills. The app was designed to improve their behavior, communication and social interaction with the help of parents and teachers.

Project: Machine Learning Model to analyze the economy and predict the retail sale in China **Nov 2021**

Team Leader | Advisor: Omar DIB

Contents: The purpose of this study was to forecast wholesale and retail trade data for China during the COVID period. Based on data from China Statistical Yearbook 2020 and the National Bureau of Statistics, a mathematical model was implemented to predict retail sales in the Chinese economy and the accuracy of three machine learning models, linear regression and classification, regression tree (CART), and multilayer perceptron neural network (MLP), was compared. As a result, DT-CART had the highest accuracy.

Project: Research on Sino-Foreign Higher Education Partnerships **Dec 2020 to Aug 2021**

Team member | Advisor: Daniel Dyer & Joseph Poniatowski

Contents: This research studied the current situation of Sino-Foreign higher education institutions, including current China education strategy, survey on Sino-Foreign higher education institutions, and students' attitude towards these institutions. Ultimately, me and 2 other researchers have conducted a prediction of tendency over Sino-Foreign higher education institutions.

Project: Interactive Machine Learning based on Player Behaviors for Better User Experiences: A Preliminary Pilot Study on the Social Playability of the Nintendo Switch During the COVID-19 Pandemic, Student Research Day
Team Leader | Advisor: Tiffany Tang **June to Aug 2021**
Contents: This study analyzed the playability of Nintendo Switch Joy-Con in the social context, especially during the pandemic, and the feasibility of applying interactive machine learning techniques to player behaviors.

Project: AR Travel Guide for Wenzhou Wuma Street **Sept to Dec 2020**
Team member | Advisor: Tiffany Tang
Contents: This project designed an AR application for foreign travelers. Travelers can use the application to understand the history of the historic site and find surrounding attractions in Wenzhou-Wuma street by AR object recognition.

MISCELLANEOUS

- Programming languages: Python, Java, SQL,
- Framework and Platform: Pytorch, TensorFlow, GymAI, Unity, Adobe UX
- Language proficiency: The Japanese-Language Proficiency Test (JLPT) N2; TOFEL IBT: 96; English: College English Test Level 6 (CET6); native speaker in Mandarin