Danni Shi

127 Redfern Dr, Rochester, NY 14620
+1(626)297-7088 | Stephanie.dannishi@outlook.com

Education

University of Rochester Rochester, NY
Master of Science in Computer Science 09.2021-05.2023
· **Selected Courses** : Collaborative Programming & Software Design, and Artificial Intelligence

Central South University Changsha, China
BSc in Intelligence Science and Technology 09.2016-06.2020
· **Selected Courses** : Data Strucutre, Algorithm Analysis And Design, and Computer Composition Principle

Publications

Lijue Liu, Yongxia Jiao, Xihong Li, Yan Ouyang, and Danni Shi. Machine learning algorithms to predict early pregnancy loss after in vitro fertilization-embryo transfer with fetal heart rate as a strong predictor. *Computer Methods and Programs in Biomedicine*, 196. https://doi.org/10.1016/j.cmpb.2020.105624

Research Experience

Joint project with Reproductive and Genetic Hospital of CITIC-Xiangya Changsha, China
Research Assistant 01.2019-08.2019
Project: Applied machine learning algorithms to the world's largest single-center dataset on fetal heart rate after in vitro fertilization-embryo transfer to predict early pregnancy loss
· Preprocessed the data with Python and R Language: cleaned and normalized the data with methods such as One-Hot Encoding, Stratified Random Sampling; determined the predictive variables by building Multiple Linear Regression models to conduct the correlation analysis with other strategies such as significance test, L1-Regularization, Lasso Logistic and dimension reduction
· Built and compared 6 classification models, including Logistic Regression, SVM, Decision Tree, Back Propagation Neural Network, XGBoost, and Random Forest; the model predicted with the highest accuracy was Random Forest, of which recall rate, F1 and AUC reached 0.97

Bachelor Graduation Project Changsha, China
Independent Research 02.2020-05.2020
Project: Design and Implementation of Automatic Video Game Agent Based on Reinforcement Learning
· Formulated Super Mario Bros as a RL problem, designed a Mario controller agent that could learn from the game raw pixel data and in-game score based on Double Deep Q-learning algorithm
· Implemented the model using PyTorch and OpenAI Gym, and trained the agent in SMB World 1-1
· Evaluated the model, and completed the bachelor's thesis

Intern Experience

NIO, Inc. Shanghai, China
Product Manager Intern (in Digital Cockpit Section) 03.2021-07.2021
· Participated in the development and update of 6 vehicle control functions, gathered and analyzed requirements, discussed and defined function details with hardware engineers
· Created 6 PRDs independently, and gave presentations to our team regularly to elaborate product requirements
· Collaborated closely with SDE, QA, and UI/UX designers to ensure on-time delivery

Skills

Programming Languages: Python, Rust, Haskell, C, MATLAB, SQL
Technologies: NumPy, Pandas, scikit-learn, Git
Tools: VSCode, Visual Studio, Jupyter, Navicat