Eric Vu

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EDUCATION

Southern Methodist University, Bobby B. Lyle School of Engineering Dallas, TX

Bachelor of Computer Science - Data Science

LEADERSHIP AND ACADEMIC EXPERIENCES

ENGR1357: Introduction of Engineering Design

- Collaborated as a team to build an Arduino robot to solve a maze using PID from sensor inputs
- Allocated task for each member to improve team's efficiency as well as settle down team conflicts
- Deliver presentations and 3D CAD Model every Sprints
- Final challenge's champion - First place over 20 teams

ASA DataFest 2022 - Texas: Introduction of Engineering Design

- Developed reasonable metrics from complex logs dataset to annotate features and evaluate students' skill sets
- Implemented XGBoost Classifier (81.8% accuracy on test set) and Logistic Regressions (62.3% accuracy on test set) based on 32 different input features engineered to select a model that best assists psychologists.
- Utilized Tableau to visualize feature importance from the two predictive models.
- Best in Show Award - First place in all three categories

ENGINEERING PROJECTS AND RESEARCH

Medichain: Block chain for digital COVID-19 vaccine and medical record September 2021 – Present

- Utilize Python's Asyncio Protocol to create node server to receive medical record from patients/ doctors.
- Design data pipeline from user to nodes and forwarding to all registered nodes for consensus algorithm.
- Awarded $1000 seed money from SMU Big iDeas 2021

Kaggle Competition: Tabular Playground Series 2021: May 2021- July 2021

- Forecast Air Quality properties by implementing LSTMs Neural Network and 1D Convolution on TensorFlow
- Feature engineered data and improved accuracy by 53% (from 1.74 RMSLE to 0.81 RMSLE) by creating different relations between data.
- Normalized inputs data using Max-min normalization, log transformation so that the model can optimize faster

RIVER SAVER: Robot that helps to collect floating debris on rivers, lakes August 2020 - May 2021

- Utilized Computer Vision, CAD designs, and electronics to help collecting floating debris on the river.
- Integrated Yolov4-tiny architecture on mobile phone (Android) to detect debris
- Acquired an eco-friendly way of collecting floating debris passively using paddle instead of electronics gate

STEW: Steps To End Wastes August 2019 – May 2020

- Built and designed application that provide incentives to the users for enacting eco-friendly choices - bring eco-friendly item when they are going out
- Implemented and deployed Google's Xception model with TensorFlow and TensorFlow Lite on mobile platform using Android Studio and published on Google CH Play store
- Created a community of up to 70 users to share their environment saving results

ADDITIONAL INFORMATIONS:

Programming skills: C, C++, and Python with TensorFlow, Keras for Deep Learning and Machine Learning

Embedded skills: Autodesk Inventor, Fusion 360, 3D printing, and Arduino, Atmel microcontrollers

Courses: Coursera's Deep Learning and TensorFlow Developer Specialization

Awards: SMU Distinguished Scholar, SMU Discovery Scholarship, Mustang Award, SMU Big Ideas Award