

Xuan Wang (Ayla)

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SUMMARY

Research Experience: 2-year undergrad & graduate research experience building models and solving analytical problems using ML, DL such data-science related methods;

Skills & Tools: **Programming Languages:** Python (libraries: numpy, scipy, pandas, matplotlib; packages: sklearn, keras, tensorflow), Java | **Databases:** SQL | **Visualization:** MATLAB, Tableau | **Statistics:** SPSS | **Frameworks:** PHP, CSS

EDUCATION

MS In Information Studies - The University of Texas at Austin | GPA : 3.85/4.00 Aug 2019 - May 2021

Courses taken : Data Mining, AI in Health, Database Management, Data Wrangling, Data storytelling,

BS In Electronic Commerce - Dalian University of Technology | GPA : 3.30/4.00 Sep 2015 - Jun 2019

Courses taken : .NET Programming, Java and Object-oriented Programming, Data Structure, Probability and Statistics

National Taiwan University of Science and Technology, 2016 Fall semester Exchange program | GPA : 3.60/4.00

PROJECTS

Clinical Narrative in Apache cTAKES (NLP project, focuses on clinical care) Ongoing

- Using Apache cTAKES (Java) extract information from electronic medical record clinical text.

Readmission Prediction for Hospital Feb 2020 - May 2020

- **Data preparation:** Balanced the data with under-sampling and evaluated the probability distribution of words with Zipf's law and prepared cleaned labels.
- **Tokenization:** Represented text features with Bag-of-Words approach, built tokenizers to split text into individual words and then created vectorizers on the clinical notes as the input features of the predict models.
- **Modeling:** Forecasted the boolean results with regards to the input features via Random forest, CNN with LSTM model and XGBoost.

Explore the Deep learning Models with Extrasensory Dataset Feb 2020 - May 2020

- **Feature selection:** Used Sequential Forward Selection (SFS) and Auto-encoder to select features from the datasets.
- **MLP Model:** Developed traditional supervised learning methods like random forest and Neural Networks like MLPs, RNNs and LSTM models and applied dropout and batch normalization to avoid overfitting.
- **Evaluation:** Compared the balanced accuracy from those methods and gave the prediction based on the best-performance model.

Web pages Design Oct 2019 - Dec 2019

- **Team work:** Drafted the layout of web pages and created table structures with respect to the entity relationships.
- **Front-end development:** Generated dynamic HTML pages with PHP and CSS and paged out the results in tabular form.
- **Database:** Added MySQL connections via PHP to query among massive tables in MariaDB.

An Intelligent Traffic Light System Based on Digital Infochemicals Mar 2010 - Jun 2019

- Constructed an intelligent traffic simulation model from the perspective of complex adaptive.
- Used Python and SUMO platform to build the simulation intersection and conducted model verification.
- Interacted with simulation environment through Traci interface in order to control signal light with python.

INTERNSHIP EXPERIENCE

Dayi TechnologyCo., LTD (China) Jul 2018 - Aug 2018

Database Operation and Maintenance Assistant in Data Operation Department

- Obtained knowledge of databases and was responsible for database maintenance.
- Wrote MySQL statements in both Windows and Linux and completed database connection using JAVA.
- Updated the database by utilizing the principle of master-slave synchronization.