TIANQI XIE

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EDUCATION

University of Southern California, CA, USA — Jan 2022 - Dec 2023(exp)
Msc Applied Data Science — 4.0/4.0

Xiamen University, Xiamen, China — Aug 2016 – Jun 2020
Bsc Computer Science — 3.4/4.0

- Awards: 1st-grade Scholarship (top 5%, 2018), Arts & Sports Scholarship (top 5%, 2018), Merit Student (top 10%, 2018)

SKILLS

Programming: Python, SQL, Java, HTML5, CSS, Javascript, C/C++, Scala, Shell, Matlab
Technologies/Tools: Linux, MySQL, Flask, Django, React, Git, Redis, NodeJs, Hive, Spark, Flink, Kafka, Tensorflow
Proficient Fields: Software Engineering, Database, Big data, ETL, Machine learning, Deep learning

WORK EXPERIENCE

Zuoyebang Education Technology (Beijing) Co., Ltd — Beijing, China
Big Data Engineer — Sep 2020 – Aug 2021

- Monitor **90%** of the data output from the data warehouse by constructing a data quality platform using **Java SSM** framework and **Quartz** scheduling system
- Design an algorithm to calculate the length of students' listening time based on live room heartbeat data
- Build a data warehouse based on **Hive** and **HDFS** to manage students' information (class duration, test scores, gift distribution, etc)**,** satisfied with more than **95%** of data search work for data analysts
- Adapted **Flink** as stream data processing engine and **Redis** as state cache database to process the data provided by **Kafka** and then wrote the real-time data into **Elasticsearch/Doris** to support the online data dashboard

Yongyou Network Technology — Jiangxi, China
Software Engineer Intern — Jun 2019 – Jul 2019

- Used **Impala** to process the data of monthly sales volume (table connection, table retrieval, etc) through **SQL** statements and invoked **Echarts** interfaces to visualize the sales data in support of decision making
- Cooperated with front-end engineers to write **Javascript** code to develop homepage for the served company

PUBLICATIONS

Ubicomp 2019 — Sep 2019

- 1st co-author: *Identifying Urban Villages from City-Wide Satellite Imagery Leveraging **Mask R-CNN***
- Attend the Ubicomp 2019 in London and kept abreast of latest research directions of ubiquitous computing

IEEE Systems Journal — Aug 2020

- *iTV: Inferring Traffic Violation-Prone Locations With Vehicle Trajectories and Road Environment Data*

PROFESSIONAL EXPERIENCE

LA Crime Awareness and Weather, USC — Feb 2022 – May 2022

- Led a team to design and build an app. This app presents various information about the past crimes in LA, allowing people to find nearby crime cases based on location and view crime analysis in the LA area
- Used **Spark** to process the raw data stored in the **Firebase** and wrote it into **MySQL** database in **AWS** EC2
- Wrote python scripts and **SQL** query using **Flask** backend framework to return crime and weather data taken from **MySQL** database to the front-end pages
- Constructed the overall front-end system based on **Bootstrap** framework, used **Ajax** to request backend data and visualize the crime situation and analysis charts on the web pages through **Echarts** and **Google Map API**

Identifying Urban Villages from City-Wide Satellite Imagery Leveraging Mask R-CNN — Apr 2019 – Jul 2019

- Clip the large satellite cloud image of Xiamen into small patches and collect the urban village mask labels
- Train and apply **Mask R-CNN** model to Xiamen urban-village detection, and accurately segments the urban villages' regional boundaries with an IoU of **74.48%**

Urban Smart Emergency Response Based on Big Data — Oct 2018 – May 2019

- Adopt deep learning methods to predict the prior-disaster road damage, providing scientific guidance for evacuation decision making
- **Crawl** multi-source data about disaster occurrence places and hope to explore disaster prediction methods which is based on **GCRNN**
- Visualize disaster events in Xiamen by constructing a webpage using **Django** and **Bmap API**
- Published: *PANDA: predicting road risks after natural disasters leveraging heterogeneous urban data*