Fanzhong Kong

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EDUCATION

University of Michigan, Ann Arbor, MI   **Sep. 2016 – Apr. 2018**
Bachelor of Computer Science   *GPA: 3.87/4.00*

University of Michigan, Ann Arbor, MI   **Sep.2018 – Dec. 2019**
Master of Computer Science

EXPERIENCE

HASCO Company – Python   **May 2018 – Aug. 2018**
SDE Internship, Dynamic Trajectory of Vehicle

- Built kinematic model & GUI to predict the forward trajectory of the vehicle through Integration & PyQt5
- Used Mean Shift & B-Spline Non-rigid Image Registration Algorithm to obtain the car trajectory from camera
- Compared different methods by experiments and adjusted parameters to reduce the measurement error within 5%

University of Michigan Database Research Group – Python (Main), Java, CoffeeScript   **May 2017 – Apr. 2018**
Research Assistant, Code Completion System Group under Prof. Michael Cafarella

- Built a REST API server on a Linux server with the Atom plug-in, which enables simultaneous requests
- Developed machine learning features & machine readable dictionary to improve the accuracy to 48%
- Used Jupyter Notebook & Github to train the LSTM on AWS with GPU while maintaining code consistency

University of Michigan Biomechanics Physiology Lab – C++, Github   **Mar. 2017 – Sep. 2017**
Software Developer, 3DSSPP (an MFC software used by Ford and other research groups) Group

- Developed functions based on *openGL* in an existing huge framework
- Located and corrected existing bugs, collaborating to improve the code or low efficient algorithm
- Added similar functions by modifying the inheritance tree to avoid duplicated code

PROJECTS

Wiki search engine – Python, HTML, JavaScript, mySQL

- Developed a scalable, integrated, web search engine with mySQL
- Used distributed computing (MapReduce) to speed up ranking process and avoid memory overflow by Hadoop
- Separated the index ranking from the search engine server to enables engine scalability

File Index Server – C++

- Implement a multi-threaded, secure file server with multi-user privilege control through socket programming
- Applied the hand-by-hand, read-write lock to guarantee the consistency of the file system

Sentiments Classification on Twitter Data – Python

- Extracted feature with bag-of-words, applied SVM and One vs. One method to do the multiclass prediction
- Used different metrics (F1-score, AUROC, …) via cross validation to determine hyperparameters

Relational Database Management – Java, SQLPlus

- Used JDBC to access database to access and modify data with least data delivery principle
- Drew ER diagram to design the table schema and avoid duplicate data storage

See more about personal projects (java, android, website) in https://kongfanzhong.github.io/personal-website-kfz/

SKILLS

Languages: C++, Python, Java, JavaScript, HTML, Matlab, CoffeeScript, SQLPlus, MySQL, Sqllite3