JIAZHEN ZHU

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EDUCATION

MASSACHUSETTS INSITITUTE OF TECHNOLOGY   **Washington, DC**
Statistics and Data Science (MicroMaster - Online)   *July 2018 – Present*

- Probability - The Science of Uncertainty and Data

GEORGIA INSTITUTE OF TECHNOLOGY   **Washington, DC**
Analytics: Essential Tools and Methods (MicroMaster - Online)   *Jan 2017 – May 2018*
- GT Introduction to Analytics Modeling
- Introduction to Computing for Data Analysis
- Data Analytics in Business

THE GEORGE WASHINGTON UNIVERSITY, School of Engineering and Applied Science   **Washington, DC**
Master of Science (M.S.)   *Jan 2013 – August 2014*
- GPA 3.65
- Areas of focus: Data Mining, Database Management Systems, Design & Analysis of Algorithm

SHANGHAI UNIVERSITY, School of Computer Engineering and Science   **Shanghai, China**
Bachelor of Science (B.S.)   *Mar 2007 – Mar 2011*
- Research Assistant
- IT Internship at Price Waterhouse Coopers

EXPERIENCE

NETE Solutions   **Mclean, VA, USA**
NETE
Data Scientist/Data Engineer   *June 2014 - Present*
- **Data Science.**
    - Analyzed security incidents and vulnerability data and developed algorithms to estimate security status (priority, severity, alert and mitigated on-time) and for better mitigating risks and protecting institute.
    - Developed near real-time info-security data application which can recommend solution based on million data.
    - Developing budget data application which can help officer to better plan, track, and manage IT investments across the institute.
    - Developed *Python, Jupyter* and *SQL* queries to deliver reports based on *Description Analysis*.
    - Designed dashboards to show the data using *D3* and *Tableau*.

- **Data Engineering.**
    - Lead the data engineering team to process data infrastructure.
    - Tune algorithm and query performance based on large dataset.
    - Designed and improved the data warehouse access performance.
    - Automated process of extract, transform, clean and load (ETL) data using *Python* scripts.
    - Automated process of checking the data quality using *Python* scripts.
    - Integrated *Data Pipeline*.
    - Used *Python* to analyze queries to create a *JSON* files which was used in the Front-End and *D3's* resource.
    - Using *Python* to analyze queries to extract databases' names which support *JSON*.
    - Created the version control system for database in order to track the change data using *Python*.
    - Migrated tables from *MS-SQL* database to *MySQL* database.
    - Migrating tables from *MS-SQL* database to *PostgreSQL* database.

- **Web Development.**
    - Used PERN (PostgreSQL, Express, React, Node) to create Data Viz Site based on D3 and RESTful API.
    - Using *AngularJS* to create a single application website based on RESTful API.

Mr. Jiazhen Zhu

Data Discovery Lab | **McLean, VA, USA**
TTU
Research Assistant | *May 2018 – Present*

- **Cotton Prediction.**
    - Designed and ran multi-modal cotton yield study.
    - Developed tools and algorithm to predict the cotton yield at Texas.

- **Coordinating Disaster Emergency Response with Heuristic Reinforcement Learning.**
    - Used *Heuristic Reinforcement Learning* to coordinate volunteers and victims.
    - Design the Data Viz to support our algorithm's performance using *Jupyter Notebook*.

CSTS / CSC (China) | **Shanghai, China**
Citigroup / CSC
Software Engineer (Data) | *Mar 2011 – Dec 2012*

- **Small Financial System.**
    - Developed and maintained Banking Authorization Front-End System, using COBOL and PL1, in Hong Kong and Belgium team, leading to 9% and 12% decrease in error issues in that two countries.

- **Business Intelligence.**
    - Transferred, maintained and reported big data to biz in the Vietnam team. Data migration is from old data model to new platform using DataStage and EXEL, leading to increase efficiency for extracting data.

Multimedia Technology Lab | **Shanghai, China**
Shanghai University
Research Assistant | *Jan 2009 – Mar 2011*

- **Image Quality Assessment Algorithm.**
    - Created a novel reduced-reference IQA algorithm to increase precise of image recognition and lower computation complexity. The new algorithm was implemented by the system of face recognition, leading to a 15% increase in face recognition and 10% decrease in timing costs.

- **Face Recognition.**
    - Developed the User Interface and background application to assemble a system of face recognition using Dynamic Link Library (DLL).

COMPUTER SKILLS

- **Language:**   Python (expert), Java (proficient), C++ (prior experience), VB (prior experience).
- **Database:**   ORACLE (expert), MySQL (expert), PostgreSQL(proficient), Mongo(proficient), SQL Server (proficient), PL/SQL (prior experience), and T-SQL (prior experience).
- **Web & Viz:**   HTML (proficient), CSS (proficient), JavaScript (proficient), React(proficient), AngularJS (proficient), D3(proficient)
- **Business Intelligence:** ETL model (proficient), DataStage (prior experience), MATLAB (prior experience), Hadoop/parallel processing (learning)

MERITS

Publication: Jiazhen, Zhu, Yuchun, Fang, Pengjun, Ji, Abdl, Moad-EL, Wang, Dai: RRAR: A novel reduced-reference IQA algorithm for facial images. In: Image Processing (ICIP), 2011 18th IEEE International Conference on, pp. 3313-3316 (2011)

Community: the volunteer of Expo 2010 Shanghai