Jiajie Qin

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HIGHLIGHT SUMMARY

Aspiring data scientist with MS degree and 2+ years of professional experience in Data. Dedicated to optimizing business process and data-driven decisions leveraged by SQL, Python, Data Mining, ETL, Data Warehouse, and Visualization.

WORK EXPERIENCE

British Council   **Beijing, China**
Data Analyst Intern, *Procurement & Business*   **03/2021 – 09/2021**

- Achieved a $14K+ savings by evaluating 300+ contracts and 100+ tenders within education, business, and services industries. E.g., Led **data mining and processing** of 10,000+ unstructured car rental route information among vendors, which lead to improved negotiation strategies, and improved our data organization in the backend.
- Automated and optimized business processes, such as accelerated category plan overview with auto-generated **Power BI** and **Tableau** live dashboards, which reduced 80% of time spent on the processes.
- Drive projects delivery with IT and procurement managers. E.g., Achieved 100% contract renewal goals by reviewing progress and KPIs, and trained 3 new employees for latest process compliance and bidding system.

Chinese Academy of Sciences   **Beijing, China**
Data Engineer Intern, *IoT Information*   **07/2019 – 09/2020**

- Developed industry categorical APIs for a $1M+ companies management system based on company name and business scope, with the combination of **machine learning (e.g., Classification Intelligence, Dimension Deduction)**.
- Collected 95%+ coverage data for a nationwide IoT devices database with **Scrapy crawler** in **Python**, by automatically extracting devices' detailed information from 100,000+ various websites with advanced anti-scraping mechanisms.
- Transformed real-time DoS attacks information from **HTML to NoSQL database**, parsed with **NLP** by constructing **syntax tree** above the text semantic segments and filtering component types, then extracted data with **SQL**.

RESEARCH PROJECTS

Research on Bond Credit Risk Analysis Based on Machine Learning   **Dec 2020 – present**

- Optimized the prediction performance over 87%, by analyzing correlations and re-defining the 25+ core economics **metrics** (e.g., credit spread, total revenue, city GDP, time series), under the supervised regression model with **Python**.
- Achieved 93%+ and 99.18%+ improvements in prediction accuracy respectively, by applying **statistical** ideas (e.g., differential and aggregation) and **ensemble learning** based on **pruned** decision tree and neural network algorithms.
- Set up a data pipeline for tracking product price fluctuation. Scraped and extracted price data by running **SQL** queries with **AWS Athena**; Stored source data in **S3**; Implemented data analytics with **Spark** on Amazon **EMR**; Processed data with **Pandas** on **Google Colab**; Presented insights with interactive **Tableau** dashboard.

Parking Violation Detecting Robot Based on Computer Vision & SLAM   **Jun 2019 – Jul 2020**

- Led a cross-functional team of 7 students within one year, building a **full-stack system** for an automatic petrol robot, including Cloud Computing, Hardware Development, Computer Vision Algorithms and WebApp modules.
- Proposed violations detection algorithms according to **Euclidean distance and** between vehicle centroid and lane, by applying object detection technique of **OpenCV** and **Yolo v3** in **Linux** operating system and **Ali Cloud**. Achieved a 20%+ enhancement in accuracy, by transforming 3-dimensional **geometrical** relationships between the shadow framework and parking line into 2-dimensional descriptions. Managed code issues and version iterations by **GitHub**.

EDUCATION

University of Washington   **Seattle, United States**
Master of Science, Information System (STEM)   June 2022
Beijing University of Posts and Telecommunications   **Beijing, China**
Bachelor of Science (Engineering), Computer Sciences - Internet of Things Engineering   June 2021
Queen Mary University of London   **London, United Kingdom**
Bachelor of Science (Engineering), Internet of Things Engineering *(First Class Honours)*   June 2021