Kellan Jiang

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SUMMARY

Master's in Electrical Engineering with a comprehensive background in software engineering and AI-driven development, from designing scalable applications to implementing machine learning solutions. Experienced in Python, Java, SQL, and machine learning, with a proven ability to translate complex requirements into efficient, impactful solutions. Known for aligning AI and software projects with business objectives, delivering high-quality results through collaborative, detail-oriented project management.

EXPERIENCES

DingSheng Garment Company
Mar 2023 - Present
Software Engineer
Remote

- **ETL Automation**: Enhanced **ETL** processes with automated data validation and error detection scripts in **Java** and **PostgreSQL**, reducing data errors by **50%** and improving the reliability of data for downstream analytics.
- **Data Modeling**: Developed efficient **data schemas** and implemented **indexing** techniques, achieving a **40%** reduction in query times. Streamlined data retrieval processes to support real-time analytics.
- **Image Recognition**: Fine-tuned **image processing** models for license plate recognition using **OpenCV**, increasing recognition accuracy by **20%** in varying lighting conditions, contributing to reliable real-world deployment.
- **Anomaly Detection**: Applied **unsupervised learning** algorithms, including **K-means clustering** in **Scikit-learn**, to analyze network traffic patterns and detect anomalies, reducing incident response times by **35%** and enhancing system security.

Bell's Welding and Machincal Repair
Dec 2019 - May 2021
Software Engineer
Pennsylvania, United States

- **ETL Pipeline**: Designed and implemented a scalable ETL pipeline using **Python** and **PySpark** to integrate diverse data sources like CSV and web forms, achieving **50%** efficiency gains and reducing data inconsistencies by **30%**.
- **Data Automation**: Developed data verification and analysis workflows using **Python**, **SQL**, and **Pandas**, creating custom scripts for streamlined extraction and transformation, and reducing reporting time by **80%**.
- **Technical Documentation**: Authored **30+ technical documents** with flowcharts and diagrams for cross-functional use, reducing customer support queries by **90%** and improving team self-sufficiency.

PJM Interconnection
Jan 2018 - Aug 2018
Software Engineer
Pennsylvania, United States

- **Requirement Analysis**: Led requirement analysis and collaborated across teams to identify enhancements for product logic, optimizing user experience and system efficiency, leading to improved software reliability.
- **Testing Optimization**: Developed and maintained 50+ unit and integration tests in **Python**, enhancing test coverage and reducing execution times by **30%** with strategies like caching and profiling.

PROJECTS

Money Flow
Mar 2024 - Present
Proejct Leader
Ontario, Canada

- **Spending Analysis with ML**: Integrated machine learning algorithms to analyze user spending patterns and generate budget forecasts, increasing budget planning efficiency by **70%**.
- **Automated Receipt Processing**: Built an image recognition module in **Python** using **OCR** for receipt data extraction, achieving **90%** efficiency in automated data capture and categorization.

Kuang's Place
Mar 2020 - Present
Personal Project
Ontario, Canada

- **Website Design**: Designed an interactive website using **JavaScript**, **CSS**, and **HTML** with animations and transitions, boosting user engagement by **50%**.
- **Backend Integration**: Developed a **Python** backend with **PostgreSQL** for dynamic content management, using **APIs** and **JSON** for efficient data flow, improving workflow by **90%**.
- **Website Testing**: Conducted **unit**, **functional**, and **end-to-end testing** with **Selenium** to ensure responsiveness and reliability across devices, optimizing performance and user experience

EDUCATION

University of Waterloo
May 2021 - Dec 2022
Electrical Engineering | Master | Focusing Field: Machine Learning and AI & Software
Ontario, Canada
Related Course: AI, Algorithm Design, Optimization, Data Analysis, Data Structure, Software Testing/QA
GPA: 3.8/4.0

Temple University
Aug 2015 - Dec 2019
Electrical Engineering | Bachelor | Minor: Physics
Pennsylvania, United States
Awards: Dean's List for all semesters, Honor Student
GPA: 3.8/4.0

SKILLS

- **Software**: C/C++, Python, Java, JavaScript/TypeScript, HTML, CSS, SQL, Swift, MATLAB, Docker, Git, Shell, VBA
- **Tools**: AutoCAD, SolidWorks, OpenCV, Jenkins, Amazon Web Services, Microsoft Azure, Google Cloud Platform
- **Project Management & Collaboration**: Agile, Jira, Technical Documentation, Stakeholder Engagement