Kellan Jiang

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SUMMARY

Experienced Software Engineer with a robust background in machine learning, web development, and application design. Adept in optimizing workflows, improving system efficiency, and developing user-friendly solutions. Skilled in Python, Java, TensorFlow, Docker, PostgreSQL, and Swift, with a proven track record in delivering impactful projects across diverse industries. Strong experience in AI, automation, and data analysis, complemented by a Master's in Electrical Engineering with a focus on Machine Learning and AI.

EXPERIENCES

DingSheng Garment Company
Mar 2023 - Present
Software Engineer — Remote

- **Database Management**: Leveraged **Java** to interact with **PostgreSQL** databases, improving data quality by **50%** through efficient data cleaning, transformation, and loading (**ETL**) processes.
- **UI/UX Design & Testing**: Designed **user interfaces** with a focus on user experience (UX) principles and conducted unit/integration tests to ensure functionality and visual consistency.
- **CI/CD Automation**: Implemented and configured CI/CD pipelines using **Jenkins**, automating tests and reducing manual testing effort.
- **Web Development**: Developed responsive web pages using **React**, **HTML**, and **CSS**, ensuring accessibility for users with disabilities across various platforms.

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

- **ETL Pipeline Development**: Developed an **ETL pipeline** using **Python** and **PySpark**, standardizing data from multiple sources, resulting in a **50%** improvement in workflow efficiency and a **30%** reduction in data errors.
- **Automation & Data Visualization**: Created **Shell** and **Python** scripts for automating data verification and data analysis tasks, improving reporting speed by **80%** through **NumPy**, **Pandas**, and **Matplotlib**.
- **Technical Documentation**: Authored over 30 detailed **technical documents**, streamlining cross-team collaboration and reducing customer queries by **90%**.

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

- **Testing & Optimization**: Led **system** and **acceptance testing** for management software, enhancing performance by implementing caching and profiling techniques for runtime efficiency.
- **Documentation & Stakeholder Collaboration**: Created more than 20 comprehensive **technical documents**, leveraging feedback from stakeholders to improve project plans for the Knowledge Management Center.
- **Data Product Development**: Utilized **Python** and **Microsoft SQL Server** to analyze and propose improvements for **data-driven** products, facilitating enhanced decision-making.

PROJECTS

Money Flow
Mar 2024 - Present
Proejct Leader — Ontario, Canada

- **Full-Stack Development**: Led the development of Money Flow using **Python** for prototyping, optimized with Swift and CoreData for iOS/macOS platforms.
- **Data Analysis & Machine Learning**: Implemented **machine learning** to analyze user spending patterns, improving budget planning efficiency by **70%**.
- **Image Recognition & Automation**: Developed a Python-based **image recognition** system that scans and extracts data from photographed receipts, improving data entry efficiency by **90%**.

ShroomBot - Automatic Harvesting Robot
Aug 2018 - Dec 2019
Project Leader — United States

- **Robotics & Automation**: Led the development of an **AI**-powered robot for automating mushroom harvesting, utilizing **SLAM** and **computer vision** technologies.
- **Machine Learning**: Implemented **machine learning** algorithms to detect and classify mushrooms, improving the harvesting accuracy by **85%**.
- **IoT Integration**: Designed a **cloud**-based monitoring system, enabling real-time feedback and **data collection** for further optimization.

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