Kellan Jiang

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SUMMARY

Software Developer with a Master's in Electrical Engineering, specializing in Machine Learning and AI. Experienced in developing and deploying ML models and AI-driven applications using Python, TensorFlow, and PyTorch. Skilled in building data pipelines and optimizing algorithms for performance and scalability, with a focus on delivering data-driven solutions for real-world applications.

EXPERIENCES

DingSheng Garment Company
Mar 2023 - Present
Software Engineer
Remote

- **Machine Learning**: Developed and fine-tuned AI/machine learning models for **image recognition** and **real-time object detection** using **TensorFlow** and **Python**. Achieved **85% accuracy** in anomaly detection from security camera footage, enabling automated alerts and enhancing security operations.
- **Data Processing & ETL**: Implemented data cleaning and transformation processes in **Java** and **PostgreSQL**, improving data quality by **50%**. Integrated data with **ML pipelines** for enhanced model training and performance monitoring.
- **UI Development & Automation**: Designed user-friendly interfaces following **UX principles**. Leveraged **CI/CD pipelines** using **Jenkins** for automating tests and deployments, streamlining the integration of machine learning models into production environments.
- **Cloud & Web Integration**: Deployed responsive web pages using **React** and **Angular**, integrated with cloud platforms like **AWS**, facilitating scalable access to AI-driven security applications in network security and IAM process.

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

- **ETL & Data Processing**: Engineered an **ETL pipeline** in **Python** using **PySpark** to manage data from multiple sources, improving workflow efficiency by **50%** and reducing data errors by **30%**. Integrated **machine learning data preprocessing** techniques for more effective **model training**.
- **Automation & Data Analysis**: Automated data verification and analysis using **Python**, **NumPy**, **Pandas**, and **SQL**. Implemented **isolation forest** for anomaly detection, reducing manual data review efforts by **70%**.
- **Data Visualization & Stakeholder Engagement**: Created insightful **data visualizations** using **Matplotlib**, accelerating decision-making processes. Collaborated with stakeholders to produce **data-driven products**, slashing data reporting times by **80%**.
- **Technical Documentation**: Authored and revised over 30 technical documents, ensuring smooth **ML model deployment** and facilitating cross-team collaboration, which reduced **customer-related queries by 90%**.

PROJECTS

Money Flow
Mar 2024 - Present
Proejct Leader
Ontario, Canada

- **Machine Learning & Data Analysis**: Developed and implemented **machine learning algorithms** in **Python** to analyze user spending patterns, optimizing budget planning by **70%** through predictive analytics and personalized recommendations.
- **Data Collection & Management**: Utilized **web crawling** techniques to gather real-time financial data, integrated with **SQL** for efficient data storage and retrieval. Streamlined data flow into machine learning models to ensure accurate and timely analysis.
- **Image Recognition Automation**: Created an **image recognition system** using **Python** to extract data from receipt photos, automating entry processes and increasing efficiency by **90%**.

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

- **Machine Learning & Image Recognition**: Developed and trained **machine learning models** using **TensorFlow**, **Python**, and **CUDA** for real-time identification of mushroom types from images and live video feeds, achieving an accuracy rate of **95%** with datasets processed through **AWS**.
- **Model Optimization**: Implemented advanced **parallelization**, **sampling**, and **ensemble methods** such as **K-Means**, **Support Vector Machines**, **Random Forest**, and **Gradient Boosting** to enhance model accuracy and reduce training time by **40%**.
- **Robotics Integration**: Designed the robot's **computer vision system**, integrating it with the **Robot Operating System (ROS)** to enable precise identification and harvesting of mushrooms. Developed a robust communication protocol for seamless interaction between onboard systems and external machines.

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

- **Machine Learning**: Tensorflow, PyTorch, Scikit-learn, Keras, CNN, RL, SVM, Clustering, Boosting, Ensemble Methods
- **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