Kyle Jeffrey

Senior Software & Robotics Engineer

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Hi I'm Kyle! I received my degree in robotics. I wrote a Senior Thesis on simulating Millipede movements with cheap leg actuators. In my free time I like working with robotics, and have been especially into the robot fighting scene.

For 3 years I worked throughout Googles robotic's departments: getting robots to pickup kitchens -> https://say-can.github.io/, dance -> https://www.youtube.com/watch?v=UI6IKlHh-pQ, and make music -> https://everydayrobots.com/thinking/experiments-and-explorations-robots-as-musical-instruments

After leaving Google, I've been working at Stout Industrial Technology. Owning several apps serving plant level data, embedded systems for realtime robotic control, and data science agronomic toolkits.

PROFESSIONAL EXPERIENCE

Senior Software Engineer | Stout Industrial Technology, Inc. | San Francisco, CA

Oct 2023–Present

- Owner of both React Native mobile and React web applications focused on farm operations and agronomics.
- Designed and implemented SaltStack routines for scalable, versioned software deployments on Linux-based IoT systems.
- Owner of CI/CD pipelines through Gitlab to streamline automated testing, integration, and release processes.
- Multimodal Python usage, ranging from APIs and file parsing utilities, leveraging frameworks such as FastAPI and Django to data science for agronomics, to AI model development, to embedded systems.
- Owner of AWS cloud resource provisioning, optimizing infrastructure reliability and scalability for multi-tenant production environments.
- Owner of several PLC software systems via Automation Studio, connecting physical automation processes to data collection and analysis workflows.

Software Engineer | Stout Industrial Technology, Inc. | Salinas, CA

May 2023–October 2023

- Collaborated with a cross-functional team to deliver web and mobile applications improving agricultural productivity.
- Engaged in requirements gathering and prototyping to address unique challenges in sustainable farming solutions.
- Contributed to the API development and system integration process across frontend and backend domains.
- Supported codebase cleanliness and automated testing protocols, helping maintain product stability and reliability.
- Built intuitive interfaces streamlining data visualization for end-users in agriculture technology.

Python Developer | X, the moonshot factory | Mountain View, CA
Nov 2021–January 2023

- Engineered cloud infrastructure for multi-robot simulation and services, enabling consistent replay and graphical analysis.
- Optimized service runtimes, achieving speed improvements of up to 10x via performance analysis with tools like snakeviz.
- Authored CLI utilities and bash tmux scripts to accelerate environment setup, reducing onboarding and configuration time by 300%.
- Produced integration and automated testing scripts for scalable reinforcement learning environments.
- Routinely delivered peer-reviewed code contributions, upholding high standards in software quality and collaboration.
- Applied OpenCV in prototyping and data pipeline development for advanced robotics research projects.

Teleoperator - Tactician | FS Studio | Mountain View, CA
May 2021–November 2021

- Remotely executed manipulation tasks with advanced robots using VR interfaces, supporting data-driven robotics research.
- Created graphical user interfaces enhancing data collection rates on complex manipulation projects by 30%.
- Authored comprehensive documentation and web tools to facilitate project data tracking and review.
- Integrated automated JIRA ticket generation to streamline project task management and progress traceability.
- Provided feedback to improve remote operation protocols and user workflows in high-precision environments.

Hardware Engineer / Computer Engineer | YektaSonics Inc. | Santa Cruz, CA
Jan 2019–November 2019

- Oversaw hardware and software integration initiatives on an agtech project focused on machine learning for crop health diagnostics.
- Coordinated project development timelines and priorities with academic and industry stakeholders.
- Built and maintained ML-enabled sensor arrays to collect and analyze data from agricultural environments.
- Reviewed and improved system support processes to maximize uptime and accuracy in field data collection.

EDUCATION

University of California, Santa Cruz | School Location
2020

Bachelor's degree, Mechatronics, Robotics, and Automation Engineering

SKILLS

React.js
Python
C++
Cloud Infrastructure
AWS Management
DevOps (Gitlab CI/CD)
Mobile App Development (React Native, Expo)
Linux OS Tooling
Computer Vision (OpenCV)
FastAPI, Django, Flask
Hardware Engineering
PLC Automation
Reinforcement Learning
Data Analysis
Team Collaboration