Lucas Doyle

Senior Machine Learning Engineer | San Francisco, CA

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Sounds cliché, but making code do something in the real world is what excites me. My superpowers are zero-to-one problem-solving, prototypes and last second demos that seem impossible. I've shipped at-scale across firmware, mobile, backend, frontend and ML infrastructure.

Experience

Samsara - Senior Machine Learning Engineer II

San Francisco, CA | 2018 - Present

`Python, Golang, Typescript (React, Redux, React Native), Android (Java, Kotlin)`

ML Infrastructure

Led edge infrastructure / end-to-end implementation and deployment of video pipelines for Samsara's video-based safety products. These run on 2M+ of Samsara's AI dashcams, improving driver safety, engagement, and trust at scale.

- Developed and deployed pipelines (e.g. tailgating, rolling stop sign detection, lane departure), including device farm QA automation, shadow testing, and firmware infrastructure / feature development.
- Built internal tools for debugging, evaluation, and telemetry replay; enabled scalable model iteration and observability across firmware and cloud.
- Spearheaded offline evaluation pipelines for quantized models and integrated support for multimodal data (e.g. video, IMU, GPS, hardware emulation).
- Mentored interns and collaborated cross-functionally with product, firmware, science and data teams to streamline ML deployment and validation processes.

Mobile

- Led performance and infrastructure efforts for mobile applications with 500k+ DAU, driving major improvements in responsiveness, reliability, and developer velocity.
- Helped bootstrap new apps, products and the company’s first native Android systems and mobile device management (MDM) stack.

Airware - Senior Software Engineer

San Francisco, CA | 2014 - 2018

`Javascript (React, Redux, Leaflet, React Native), Python, Swift, PHP, Golang`

Developed core technologies for a drone platform to capture, upload and process large-scale imagery into survey-grade data for insurance and mining industries.

- Created a desktop app for flashing and configuring fixed-wing and multirotor drone avionics hardware.
- Built cloud workflows for large-scale survey processing and analysis with a GIS/geospatial-focused UI.
- Developed a mobile app for drone operators using React Native and iOS, enabling geofence editing and on-device photogrammetry processing.
- Led feature development, large-scale refactors, product mergers / acquisitions; contributed to hiring, planning, and mentoring engineers.

MUJIN Inc. (株式会社MUJIN) - Software Engineer

Tokyo, Japan | 2012 - 2014

`Python (django, OpenRAVE), Javascript (Backbone/Marionette, WebGL)`

Fourth employee at a Japanese industrial robotics startup:

- Designed and implemented the web interface for the MUJIN Controller, a robotic arm workcell planning system used by Canon, Honda, and other system integrators.
- Developed customer-facing UIs featuring a real-time WebSocket-based WebGL viewer for a bin-picking system.
- Collaborated with an international team while living in Japan for two years.

Education

Rensselaer Polytechnic Institute

B.S. Computer and Systems Engineering | 2008 - 2012

Rensselaer Center for Open Source, Red & White Alumni Organization

Boeing Robotic Wingbox

Capstone - simulated intra-wing robot for aircraft inspection. (project link)

Patents

Lane departure monitoring (US12165393B1)

Context based action menu (US12150007B1)

Unmanned aerial vehicle privacy controls (US20220392353A1)