

EESHAN LONDHE

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C/C++ | Python | Java | Sensors | Radar | Lidar | Camera | Controls | SPI | I2C | UART | Operating Systems | Linux | Kernel | Drivers
| Real Time Operating Systems (RTOS) | Apple Silicon | ARM Microprocessors | ARM Assembly | RISC-V | Verilog | Big Data |
Telemetry | System Performance | Data Pipelines | Data Science | PostgreSQL | Apache Airflow | Self-Driving Cars | AI

WORK EXPERIENCE

Senior Software Engineer - Autonomous Vehicles | Apple

Nov 2018-Current

- Significantly reduced the Failure Per Mile (FPM) rate of vehicle autonomy duration by spearheading development on the vehicle Compute/OS team within Apple's autonomous car project.
- Developed and shipped a robust framework/mechanism for deploying application nodes and their interconnections to the broader application graph that controls the vehicle (ARM, C/C++, RTKitOS Apple's Real Time OS, Process Synchronization, Sensors)
- Led development of a robust metrics tracking service deployed to the vehicle OS to capture granular time-series data down to the process-level for every node/process running on the various computes. (ARM, C/C++, Python)
- Enabled tracking of CPU, RAM, execution time, GPU, and Apple Neural Engine (ANE) usage across all vehicle components. (C/C++, Python, ARM)
- Engineered and implemented a data pipeline that enables playback and tracking of vehicle metrics during missions. (Apache Airflow, Amazon S3, Python, PostgreSQL, Streamlit Dashboards, Splunk)
- Orchestrated the seamless transfer of mission data to Amazon S3, facilitating the ingestion of large datasets.
- Post-processed and analyzed big data from hundreds of daily vehicle recordings, enhancing overall system understanding and facilitating data-driven optimizations.
- Collaborated effectively with cross-disciplinary teams to integrate performance insights into the broader autonomous car project. Played a pivotal role in enhancing the project's data-driven decision-making capabilities, contributing to the improvement of the FPM rate and AI self-driving technology as a whole.

Embedded Software Engineer | Spectranetix Inc. (now *Pacific Defense*)

Jun 2016-Oct 2018

- Led board bring-up, development, and test of a RF Radiohead device. Facilitated development of the OS, kernel, drivers, and user-space applications to interact with and control RF components. (SPI, I2C, UART, C/C++, Bash, Verilog)
- Prototyped a wireless ultra-wide band mesh-networking device, useful for covert short-range communications. (C, ARM)
- Developed and shipped a RF communications API for ethernet enabled software defined radios for the the D.O.D. (C/C++)

Software Engineer Intern | Honeywell Aerospace

Jun 2015-Oct 2015

- Developed radar software to record, playback, and visualize weather data in real time (C/C++)
- Developed and tested avionics hardware including Integrated Multi-Mode Receivers and Communication Management Units where I took part in the product development lifecycle. (RF Circuits, ARINC 429 Com protocol)

EDUCATION & PROJECTS

BS in Electrical & Computer Engineering | University of Washington, Seattle

Graduated 2016

UW Eco Car Software Engineer

Sep 2014-Jan 2016

- Worked alongside a team of engineers to develop a Chevrolet Camaro into an eco-friendly hybrid vehicle.

Autonomous RoboTank

Jun 2015-Oct 2015

- Programmed an ARM based Microcontroller running FreeRTOS to drive an autonomous tank that fully avoids collisions autonomously. <https://youtu.be/dcReAuvuEgM>.