

MICHAEL FAIRMAN

System Software Engineer

michael@michaelfairman.com

RUST, SWIFT, BASH, PYTHON, C/C++,
ARM, RISC-V, x86, DSP, GPU, FPGA
LINUX, MAC/iOS, RTOS

REDWOOD MATERIALS

BATTERY ENERGY STORAGE SYSTEMS

- FIRMWARE FOR BATTERY PACK COMMUNICATIONS INTERFACES
- HOST NETWORKING AND POWER CONTROL LOGIC

Staff Firmware Engineer

SEP 2024 - PRESENT

MOXION POWER

FIRMWARE FOR MOBILE POWER UNITS

- EMBEDDED LINUX USER INTERFACE AND TELEMETRY
- RTOS BOOTLOADER AND OSAL FRAMEWORK
- COMPANY SHUT-DOWN DUE TO FUNDING

Senior Firmware Engineer

JAN 2024 - JUL 2024

VOLKSWAGEN GROUP OF AMERICA / CARIAD

VEHICLE CONTROL SYSTEMS

- PLATFORM SOFTWARE ARCHITECTURE AND HARDWARE INTEGRATION
- BOARD BRING-UP AND BSP/MCAL DRIVER SUPPORT

Fellow Software Engineer

JUL 2022 - JAN 2024

CHARGEPOINT, INC.

ELECTRIC VEHICLE CHARGING SOFTWARE

- CHARGING PROTOCOL IMPLEMENTATIONS: J1772, ISO 15118, CHAdeMO
- DEVELOPMENT, BUILD AND RELEASE FLOWS FOR MICROCONTROLLER FIRMWARE
- SECURE BOOTLOADERS WITH FIRMWARE UPDATES, ECDSA SIGNING AND VERIFICATION

Principal Software Engineer

SEP 2019 - JUL 2022

FUTURE MOBILITY CORP. / BYTON

VEHICLE GATEWAY SOFTWARE

- TOOLS FOR AUTOMATING VEHICLE NETWORK TOPOLOGY AND ROUTING FUNCTIONALITY
- LINUX KERNEL DRIVERS FOR SPI-CAN CONTROLLER

Principal Firmware Architect

DEC 2017 - JAN 2019

POLARIS, INC. / TRAILTECH

OFF-GRID VEHICLE TRACKING SYSTEMS

- FIRMWARE FOR LoRa[®] RADIO CONTROL MODULE
- MESH NETWORKING ALGORITHMS TO EXTEND EFFECTIVE RANGE
- MAP-BASED USER INTERFACE ON LINUX HOST

Senior Staff Software Engineer

FEB 2017 - DEC 2017

TESLA MOTORS

INFOTAINMENT SOFTWARE

- UI FRAMEWORK WITH ANIMATIONS, TOUCH GESTURES AND OpenGL COMPOSITOR
- TOOLS FOR CAN DEBUGGING, LOG ANALYSIS, FLEET SCANNING
- VEHICLE DRIVE TEST SUITE TO QUALIFY CARS LEAVING THE FACTORY

Senior Staff Software Engineer

DEC 2009 - JAN 2017

ALTERA CORPORATION

FPGA PROCESSORS AND DEBUG TOOLS

- NIOS SOFT-CORE PROCESSOR AND SOPC BUILDER PERIPHERALS
- SIGNALTAP ON-CHIP LOGIC ANALYZER AND PROTOCOL DECODERS
- COMPUTE FARM INFRASTRUCTURE FOR DEVELOPMENT AND TESTING

Principal Engineer

JUN 1999 - JUL 2007