Sargis Yonan

Computer, Software, and Robotics Engineer

CONTACT

Email: sargis@yonan.org
Website: sargis.yonan.org
LinkedIn: linkedin.com/in/sargisyonan
GitHub: github.com/SargisYonan

WORK EXPERIENCE

Apple Inc.

March 2019 - Present

Camera Systems Engineer

- Develop and maintain XNU kernel drivers and userspace software, including frameworks and testing tools for Apple's camera technologies.
- Design camera frameworks and client-facing APIs so apps and system services can reliably access imaging features across Apple platforms.
- Collaborate with image signal processing teams to architect interprocess communications and commanding interfaces, optimize system performance, and ensure feature compatibility.
- Lead hardware bring-up efforts, working extensively with ARM SoCs on device trees, bootloaders, the OS kernel, and userspace on Apple's platforms.
- Have contributed and shipped dozens of major features and low-level camera system software stacks across all Apple devices with cameras.
- Work closely with the factory team to ensure successful production ramping across hardware build phases and lifecycles.
- Built and optimized system-level high-performance, low-latency data delivery across the camera software and hardware stack.

SpaceX

June 2018 - September 2018

Associate Flight Software Engineer, Starlink

- Developed firmware for early-stage Starlink satellites, working on ARM-based systems with an RTOS.
- Designed fault-tolerant, system-critical code for sensor and memory drivers, contributing to reliable operation in flight.
- Implemented a time synchronization algorithm for the flight computer system, enhancing communication accuracy across satellite subsystems.

University of California, Santa Cruz

January 2018 - December 2018

Teaching Assistant

Microprocessor Systems Design (Fall 2018): Led labs on embedded systems, C programming, hardware debugging, and Linux-based software design.
Engineering Capstone Design (Winter - Spring 2018): Advised 20 senior project teams, assisting in system design, architecture, debugging, and project execution across diverse domains, including robotics and mesh networking.

CityBlooms Urban Micro Farms **June - October 2017, January - March 2019**
Embedded Software and Hardware Engineering Intern

Developed sensor and peripheral drivers in C/C++ for microcontrollers and Linux IoT systems, automating deployments for live agricultural environments.

Pearl Automation **January - December 2016**
Firmware Engineering Intern

Created software for ARM controllers and Embedded Linux. Developed a dynamic frequency scaling algorithm that significantly improved device battery life.

EDUCATION

M.Sc. in Robotics Engineering **September 2017 - December 2018**
Emphasis: Robotics Engineering & Control Theory
University of California, Santa Cruz

- Courses: Robotics, Optimal Estimation, Stochastic Filtering, Control Theory
- Thesis: Improved Field Exploration with Variance Suppressing Path Planning
- Developed path planning techniques for optimal autonomous field exploration

B.S. in Computer Engineering **September 2013 - June 2017**
Concentration: Robotics & Control
University of California, Santa Cruz

- Research/Projects: UAVs, Sensor Networking, Power Systems
- Graduated with Honors in Major

Minor in Computer Science **September 2013 - June 2017**
University of California, Santa Cruz

PROJECTS

Micro Linear Algebra Package - A matrix math library optimized for embedded systems. The library contains functionality for learning, data fitting, filtering, and controls.
github.com/SargisYonan/uLAPack

Embedded Kalman Filter - A Kalman filtering library for linear and nonlinear systems. The library is ideal for embedded systems where dynamic memory allocation is a concern.
github.com/SargisYonan/ukal

Field Exploration Simulation Framework - A MATLAB framework and simulation environment for autonomous field exploration using prediction variance suppression techniques introduced in my Masters thesis.
github.com/SargisYonan/field_exploration

KEY SKILLS

Programming: C, C++, Python, XNU Kernel Development
Embedded Systems: ARM SoCs, AVR, Firmware Development
Robotics: Sensor Fusion, Feedback Control, Sensor Design
Math: Kalman Filters, Control Theory, Geostatistics