

Kevin La Ra

Engineering & Technical Program Leader — Embedded Software, Microprocessors, Aerospace, Systems Engineering
Driving Toward AI-Enabled Autonomous Aerospace Systems and Space Compute

MSEE / MBA • U.S. Navy Officer Veteran, Information Warfare • Previous TS/SCI Clearance • Pilot: Comm/Inst & Part 107 UAS

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PROFESSIONAL SUMMARY

Engineering and technical program leader targeting Engineering Management / Technical Program Management roles in compute and AI-driven autonomous systems (aerospace and defense). Multi-disciplinary foundation across computer engineering, semiconductor design, embedded software, and business/finance. 15+ years of programming experience (C/C++/Python/assembly) for embedded and physical devices. Multiple years leading teams and projects in software, chip design, validation, and systems engineering. Complemented by an 18-month executive leadership program from Stanford GSB and a systems engineering certificate from MIT. Proven technical and team leader with 6 years as a U.S. Navy officer in the information warfare community.

Most recently returned to graduate studies at Arizona State University to deepen expertise in AI/ML, reinforcement learning, motion planning, computer vision, robotics, agentic AI, advanced computer architecture, FPGAs, and AI accelerators. Building toward the applications of AI and space computing to autonomous aerospace systems.

PROFESSIONAL EXPERIENCE

Microchip Technology (Chandler, AZ) — *Embedded Verification Engineer / Project Lead* Jan 2023 – May 2024

- Member of a multi-national team verifying the design of an ARM Cortex-M33 based microcontroller before tape-out.
- Emulation lead for the follow-on microcontroller project. Built the schedule, tracked and reported project progress.

Kutta Technologies (Phoenix, AZ) — *Software Engineer Lead* Jun 2022 – Aug 2022

- Lead software engineer on a drone resupply project for the UK Ministry of Defense, integrating Arducopter with Pixhawk hardware and a universal flight controller designed by Kutta.

Boeing (remote) — *Senior Software Project Lead* Jan 2022 – Jun 2022

- Led avionics infrastructure software projects for a new multi-purpose flight computer within Boeing AvionX's Computing Platform Software team (8 engineers).
- Used Scrum to break down software features, prioritize the backlog, plan sprints, drive daily execution, and coordinate with other engineering teams; focus areas included RTOS integration, hardware drivers, and middleware applications.

General Dynamics Mission Systems (Scottsdale, AZ) — *Software Scrum Master / Product Owner* Sep 2021 – Nov 2021

- Product owner for a services team supporting the DoD MUOS satellite communication system. Refined new product requests with customers, defined tasks, and coordinated workflow with scrum masters.
- Scrum master for the MUOS software team, coordinating sprint execution and cross-team delivery.

Northrop Grumman (Roy, UT) — *Requirements Thread Lead / Senior Principal Systems Engineer* Aug 2020 – Sep 2021

- Thread lead for a large missile program (Sentinel ICBM). Worked directly with the US Air Force and senior Northrop architects to refine top-level requirements, allocate them to segments, and create initial low-level verification plans.
- Member of systems engineering review board approving segment-level requirements changes.

Independent Contractor — *Aerospace & Defense Software / Systems Engineering* Nov 2018 – Apr 2020

- Boeing (Mesa, AZ), Senior Software Engineer (contract) — Programmed new features and fixed bugs in C++ for AH-64E Apache helicopter pilot flight training simulators.
- General Dynamics Mission Systems (Scottsdale, AZ), Senior Principal Systems Engineer (contract) — Led validation and verification planning for a GPS crypto subsystem. Analyzed hardware/software requirements, tracked with DOORS.

Northrop Grumman (Chandler, AZ) — *Deputy Team Lead / Senior Principal Software Engineer* Feb 2018 – Nov 2018

- Deputy software lead for a multi-billion dollar government missile interceptor program. Team developed a unit-test suite, improvements to flight code, two software models of the embedded computers, and an embedded O/S upgrade.
- Software lead for a program integrating a new inertial measurement unit into an existing rocket to test performance as the new guidance system for an upgraded missile interceptor. Researched the current code base, developed the engineering plan, established the test bench and test procedures. Coordinated plans and schedule with electrical, mechanical, GNC, and systems engineering departments to meet software integration and delivery deadlines.

- Helped bring the Scrum framework into a department of 30 engineers. Served as Scrum Master, improving communication, focus, and output — defined stories, planned sprints, held daily scrums, tracked burn.
- Tracked project EVMS. Reported monthly financial metrics to the prime contractor and Missile Defense Agency.

Full-Time Parent / Independent Study — Career Break

Nov 2016 – Feb 2018

- Took primary caregiving responsibility for family while completing Udacity Self-Driving Car Engineer and Flying Car Nanodegrees (see Software Projects below): autonomous systems, ROS, sensor fusion, computer vision, deep learning.

Honeywell (Phoenix, AZ) — Software Engineer

Nov 2015 – Nov 2016

- Prototyped a method in C++ to display supersonic boom projections on cockpit map display for NASA X-59 test project.

Amkor Technology (Tempe, AZ) — Business Development / Operations and Product Manager

May 2014 – Oct 2015

- Worked with the VP of Sales to market Amkor competencies and negotiate \$375M in new business contracts with Intel for assembly of solid-state disk drive and automotive infotainment CPU modules.
- Performed market research and pricing analysis of infotainment CPU module. Developed accurate production cost models from a review of factory assembly procedures. Recommended competitive pricing strategies to senior staff.

Garmin (Chandler, AZ) — Aviation Software Engineer

Jun 2011 – May 2014

- Led a 4-person team to design and implement the Garmin GTC570 touch-screen interface and automatic control software for Garmin's first use of electronic circuit breakers, on the Bell 525 17-passenger helicopter.
- Developed embedded C software for multiple engine instruments and the crew alert system on the G5000 avionics system in the Cessna Citation X and Sovereign business jets. Wrote tests to comply with DO-178B.

Motorola (Tempe, AZ) — Process Improvement Engineer

May 2007 – Feb 2009

- Spearheaded an 18-month project to reduce assembly cost of a new product design and prototype samples.
- Reduced the number of defects discovered during prototype builds by 50%.
- Saved \$500,000 per year in scrap and redesign costs; shortened design times by 2 months.

Intel (Chandler, AZ) — Storage Components Division — Hardware Design and Validation Engineer

Feb 2000 – Feb 2007

- Led a 3-person team in first-silicon validation, debug, and preliminary characterization of the IOP331 processor.
- Designed and implemented, in VHDL, the logic unit controlling all testing features on the IOP331.
- Authored the Design For Test (DFT) architecture spec for IOP331.
- Performed pre- and post-silicon validation of the IOP301 RAID disk controller. Wrote tests, verified logic, debugged issues.
- Drove test preparation, schedule, and debug efforts of 10 engineers across three sites.

United States Navy (Kunia, HI) — Cryptologic Officer, O-4 Lieutenant Commander

1994 – 2000

- Directed work output, training, and annual evaluations of 35 cryptologic analysts in Pacific-region Signals Intelligence.
- Entered the Navy through the highly competitive Navy Nuclear Propulsion Officer Candidate (NUPOC) Program.

EDUCATION

Arizona State University (2024-2026) Graduate studies in AI, robotics, chip architecture, and reconfigurable computing

Arizona State University (2007-2010) MBA (Finance and Strategy); MS Accounting

Georgia Institute of Technology (1994-1995) M.S. Electrical and Computer Engineering (semiconductor physics, CPU design)

University of Florida (1990 – 1994) B.S. Computer Engineering, High Honors

Stanford Graduate School of Business (2017-2018) LEAD Executive Leadership Program (certificate)

MIT (2019) Professional Certificate in Architecture and Systems Engineering

Scrum Inc. Registered Scrum Master, Registered Product Owner

SOFTWARE PROJECTS & PERSONAL

Advances In Robot Learning (spring 2025) — Built an AI agent (Linux, Python, OpenCV) to play a tabletop pinball game; applied artificial intelligence, machine learning, and computer vision.

Udacity Self-Driving Car Nanodegree — Used TensorFlow and CUDA to train a deep neural network to drive a car on a test track; applied Kalman filters for RADAR/LIDAR sensor fusion; integrated multiple systems for an autonomous car using ROS.

Udacity Flying Car Nanodegree — Flight planning, control, and state estimation for autonomous quadrotor/fixed-wing flight.

Airplane Pilot — Commercial/Instrument rated, single-engine + Unmanned Aircraft (UAS) • 2X Ironman & 12X 70.3 finisher