

Kevin La Ra

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Graduate Student in AI & GPU architecture • Engineer – Software, Microprocessors, Aerospace Systems • MSEE / MBA
Technical Project Manager • Scrum Master • Private Pilot • Ironman • U.S. Navy Officer Veteran • Previous TS/SCI clearance

PROFESSIONAL SUMMARY

Life-long learner back in graduate school to build my next career at the intersection of AI and GPU architecture. Currently enrolled in the computer science department at Arizona State University. University experience in machine learning, reinforcement learning, motion planning, computer vision, and agentic AI. Multi-disciplinary foundation across computer engineering, semiconductor design, and business/finance, with several years of experience in software, computer chip design, validation and debug, and systems engineering. 15+ years of programming experience in C/C++/Python/Assembly for embedded and physical devices. Complemented by an 18-month executive leadership training program from Stanford and a systems engineering certification from MIT. A proven technical and team leader with 6 years as a U.S. Navy officer.

PROFESSIONAL EXPERIENCE HIGHLIGHTS

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.
- Wrote multi-unit verification tests in C. Ran tests on a Xilinx FPGA that emulates the functionality of the microcontroller.
- Updated peripheral device drivers to assist in product configuration and eliminate manual register setting.
- Emulation lead for the follow-on microcontroller project. Built 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. Integration of Arducopter with Pixhawk hardware and a universal flight controller designed by Kutta. Project cancelled due to Ukraine war.

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

- Lead avionics infrastructure software projects on a new, multi-purpose, flight computer in the Computing Platform Software team within Boeing AvionX. Team consists of 8 software engineers.
- Used scrum to breakdown software features, prioritize backlog, plan sprints, drive daily execution, and coordinate with other engineering teams. Software project focused on RTOS integration, hardware drivers and middleware apps.

Northrop Grumman (Roy, UT) – Senior Principal Systems Engineer Aug 2020 – Sep 2021

- Requirements thread lead on Sentinel ICBM program. Worked directly with US Air Force and senior Northrop architects to refine top-level requirements, allocate them to segments, and create initial verification plans.
- Extensive use of DOORS to trace requirements, write good allocation justifications and updated segment-level requirements as the program design matured.
- Participated in system engineering review boards to review and approve changes to segment level requirements.

Northrop Grumman (Chandler, AZ) – Senior Principal Software Engineer Feb 2018 – Nov 2018

- Deputy software lead for multi-billion dollar government ICBM missile interceptor program. Team developed unit-test suite, improvements to flight code, two software models of the embedded computers, and embedded O/S upgrade.
- Software lead for program to integrate new inertial measurement unit into existing rocket to test performance as the new guidance system for an upgraded missile interceptor. Researched current code base, developed engineering plan, established 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 to bring Scrum framework into a department of 30 engineers. Worked as the Scrum Master improving communication, focus and output of the team. Defined stories, planned sprints, held daily scrum meetings, tracked burn.
- Tracked project EVMS. Reported monthly financial metrics to prime contractor and Missile Defense Agency.

Amkor Technology (Tempe, AZ) – Business Operations and Product Manager May 2014 – Oct 2015

- Worked with VP of sales to market Amkor competencies and negotiate \$375M in new business contracts with Intel for assembly of solid-state drive and automotive infotainment CPU modules.
- Drove manufacturing analysis with engineering to improve product design and reduce manufacturing costs.
- Performed market research for new automotive CPU. Reviewed new product assembly procedures to develop accurate production cost models, performed pricing analysis and recommended competitive pricing strategies to senior staff.

- Garmin** (Chandler, AZ) – Aviation Software Engineer Jun 2011 – May 2014
- Lead 4-person team to design and implement 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 crew alert system on the G5000 glass-cockpit avionics system in the Cessna Citation X and Sovereign business jets. Wrote tests to comply with DO-178B standard.
- Motorola** (Tempe, AZ) – Process Improvement Engineer May 2007 – Feb 2009
- Spearheaded 18-month project to reduce assembly cost of 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 3-person team in first-silicon validation, debug, and preliminary characterization of IOP331 processor.
 - Designed and implemented in VHDL a logic unit controlling all testing features.
 - Authored the Design For Test (DFT) architecture spec for IOP331.
 - Part of a team that implemented a PCI-X bus controller in an ASIC used in a data center RAID disk drive controller.
 - Drove test preparation, schedule and debug efforts of 10 engineers across three sites.
- United States Navy** (Kunia, HI) – Cryptologic Officer, O-4 Lt. Commander 1994 – 2000
- Directed work output, training and annual evaluations of 35 cryptologic analysts in Pacific-region Signals Intelligence.
 - Entered Navy in the highly-competitive Navy Nuclear Propulsion Officer Candidate (NUPOC) Program.

EDUCATION

- Arizona State University** – MS in Computer Engineering (in progress, expected May 2027)
- Arizona State University** – MBA (finance and strategy); MS Accounting
- Georgia Institute of Technology** – M.S. Electrical and Computer Engineering (semiconductor physics and CPU design)
- University of Florida** – B.S. Computer Engineering with High Honors

EXECUTIVE EDUCATION

- Stanford Graduate School of Business** – LEAD Executive Leadership Program (certificate)
gsb.stanford.edu/exec-ed/programs/stanford-lead
- Massachusetts Institute of Technology** (MIT) – Professional certificate in Architecture and System Engineering
<https://learn-xpro.mit.edu/systems-engineering>
- Scrum, Inc** – Registered Scrum Master, Registered Product Owner

SOFTWARE PROJECTS

Spring 2025 project used Linux, Python and OpenCV to program an AI agent to play a tabletop pinball game. Worked in artificial intelligence, machine learning, and computer vision.

Udacity Self-Driving Car Nanodegree Projects

- Used Robot Operating System (ROS) to integrate multiple systems for Udacity's autonomous car
- Control simulated car with a PID Controller in C++
- Localization using particle filters in C++
- Kalman filters for RADAR/LIDAR
- Used Tensorflow and CUDA to train a deep neural network to drive a car on a test track
- Finding road lane line with computer vision using Python
- Detect and track vehicles with a support vector machine
- Classify traffic signs using a convolutional neural network

PERSONAL

- **Ironman triathlete** – 2X Ironman Arizona finisher, 12X Ironman 70.3 finisher, multiple Olympic/sprint distance events.
- **Airplane Pilot** – commercial / instrument rated, single-engine
- **Professional association memberships:** Institute of Electrical and Electronics Engineers (IEEE), Association for Computing Machinery (ACM), American Institute of Aeronautics and Astronautics (AIAA) and International Council on Systems Engineering (INCOSE)