

# CALVIN LEI-CRAMER

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## EXPERIENCE

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<b>Wind River Systems</b> .....	<i>Sep 2019 - Current</i>
Senior System Engineer	Alameda, CA
Development on VxWorks RTOS, containerization and digital twin, Boost support, mentor interns	
<b>Vessel Assist</b> .....	<i>Feb 2016 - Sep 2018</i>
Deck Hand	Bethel Island, CA
Practical work experience in small teams focusing on safety, planning and communication	
<b>Julie's Strings</b> .....	<i>Oct 2015 - Sep 2017</i>
Violin Teacher	Brentwood, CA
Taught 6 students of various ages and various skill levels	

## EDUCATION

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<b>Georgia Institute of Technology</b> .....	<i>August 2021 - Current</i>
M.S. in Computer Science in Computing Systems	
<b>University of California, Davis</b> .....	<i>Sep 2017 - Jul 2019</i>
B.S. in Computer Science	GPA: 3.72
<b>Los Medanos College</b> .....	<i>Jan 2012 - May 2017</i>
Pittsburg, CA	GPA: 3.88
<b>Heritage High School</b> .....	<i>Jul 2011 - Jun 2015</i>
Brentwood, CA	GPA: 4.30

## SKILLS AND KNOWLEDGE

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<b>Computer Languages</b>	Golang, Rust, Python, Java, C, C++, Matlab, R, TI-BASIC, Lisp, Prolog
<b>Other</b>	docker, kubernetes, Jenkins, git, gdb, make, bash scripting, opencv, Keras, PyTorch, ROS, Java Swing and AWT, ImGui, ANSI escape sequences
<b>Relevant Courses</b>	High Performance Comp Arch, Software Engineering, Computer Vision, Compilers, Computer Arch, Programming Languages, Algorithms, Machine Learning, Operating Systems
<b>Human Languages</b>	English (fluent), Mandarin (learning), Spanish (a little)
<b>Instruments</b>	Violin, piano

## PROJECTS

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- Created optimizing compiler for simple language targeted for 32-bit MIPS
- Self-driving car research: studied the fundamentals of lane-line detection using computer vision, neural networks, object localization and classification, image segmentation, state estimation using Kalman filter, and PID controllers. Researched state-of-the-art deep CNN based methods for lane-line detection and classical computer vision approaches.
- Project Euler - 135 problems solved since 2017 - example of solved problem: [projecteuler.net/problem=144](https://projecteuler.net/problem=144)
- Created TUI security component configuration for VxWorks RTOS
- Contributed to Department of Defense's Iron Bank program
- Worked in team of 9 to develop map creation tool for a recreation of Warcraft II (1995) game
- Designed 15-bit RISC CPU using Logisim with a Fetch-Decode, Execute-Writeback architecture
- Developed a unix shell that supports background processes, piping, and input/output redirection

- Developed a thread library with TPS, preemption, and semaphores for multithreaded synchronization
- Implemented a FAT-like file system with block-level access to a binary file
- Implemented 32-bit FP calculator using only integer arithmetic in MARS MIPS simulator
- Ported Theseus and Minotaur game to TI-84 Plus using TI-BASIC with little memory and slow CPU
- Implemented a sorting algorithm visualizer in a step-wise sorting fashion for common sorting algorithms
- Implemented the common snake game with ANSI escape sequences to run inside a terminal

## **HONORS AND AWARDS**

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- Deans' Honor List Spring 2018, Fall 2017
- Robotics Engineering Technology Certificate of Proficiency
- ROP Student of Excellence Award
- AP Scholar (3+ scores on three or more exams)

## **PERSONAL INFORMATION / INTERESTS**

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Taught and played violin in college and high school orchestras, practical wood worker, (re)learning piano currently, love to work on [projecteuler.net](http://projecteuler.net) in free time, as well as exploring around and learning about all aspects of operating systems.