



Matthew Krenik

Engineer and Developer



US Citizen



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About me

I am an entrepreneurial-minded engineer with 7 years of professional experience in hardware and software development. I enjoy working on startups and products that create significant value. In my free time, I enjoy playing piano, basketball, mountain biking, rock climbing, and skiing.

Skills

Software:

Top: C, C++, Linux, IoT

Mid: Android, OpenCV, Javascript

Low: Python, C#, MATLAB

Electrical:

MCUs, Analog / Digital circuit design, Motor control, EDA Tools (KiCAD, Altium), Soldering

Mechanical:

3D modeling (Solidworks), MIG welding, Wood/metal shop eqpmt.

See website and CV for more details

work experience

2018-2020 Popsots —Sr. Embedded Engineer

Project managed two new HW products from start to finish
- Found, vetted, and worked with HW suppliers/ manufacturers
- Reviewed ME/EE designs and brought in house
- Developed PRD and MRD, and supervised NPI and MP builds
Designed and implemented embedded SW and IoT architecture
- Reduced provision time by 85% and increased reliability by 50%

2016-2018 iRobot —Robotics Software Engineer

Supervised assembly line sensor calibration and test software
Wrote new robot navigation test, improving code coverage to 80%
Worked on features/bugs for robot path planning and state

2012-2015 Vertice Incorporated —Founder

Invented a smart, position-aware hair clipper
Wrote and filed eight patents (granted)
Led a team of four engineers to develop working prototypes
Raised >\$60K and had a profitable exit

education

2014-2016 ETH Zurich (#7 by QS World Univ. Rankings in 2019)

M.Sc. in Robotics, Systems, and Controls
GPA: 5.76 / 6.0 (Highest distinction)

2011-2013 University of Texas at Dallas

B.Sc. in Electrical Engineering
M.Sc. in Innovation and Entrepreneurship (60% completed)
GPA: 3.99 / 4.0 (Summa Cum Laude)
McDermott Fellowship (full tuition, room+board, stipend)
Goldwater Fellowship (nationwide UG research award)

2009-2011 Texas Academy of Math and Science

Advanced early college program at University of North Texas
GPA: 4.0 / 4.0

select projects

2016 Smart Bed Project

Created bed with sensors and actuators that adapts to user's body pose; modeled system in Simulink and developed optimal control strategies

2015 Feedback for Real-Walking VR

Implemented visual, audio, and haptic feedback mechanisms on a real-walking VR system to prevent unplanned user behavior

other experience

2016 Recurse Center

Pair prog. SW, comp. vision, and machine learning projects

2015 ABB —Software Development Intern

Developed four industrial demos on Oculus and Leap Motion

2014-2015 JetBrains —Product Ambassador

Organized events and code challenges to promote SW products

2012 University of Maine —Research Assistant

Built a low cost harmonic radar system for detecting wood frogs