Matthew Krenik

Engineer and Developer

US Citizen

Austin, TX

(+1) 469-878-5174

mkrenik.github.io

m-krenik@hotmail.com

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

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 - Graduated with 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 (premier UG research scholarship)

2009-2011 **Texas Academy of Math and Science**
Advanced early college program at University of North Texas
GPA: 4.0 / 4.0

work experience

2018-2020 **Popspots - Sr. Embedded Engineer** Austin, TX
Reverse eng. legacy devices to improve reliability by 50%
Reduced device initialization time by 85%
Manage all relationships with hardware suppliers / manufacturers
Technical PM and ME/EE design review for two new product lines
Designed and implemented embedded SW and IoT architecture

2016-2018 **iRobot - Robotics Software Engineer** Boston, MA
Primary for assembly line sensor calibration and test software
Developed new assembly line navigation test
Developed features, debug, and test for all robots in development
Specific work on path planning, state machines, and robot UI

2012-2015 **Vertice Incorporated - Founder** Dallas, TX
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

select projects

2016 **Smart Bed Project**
Bed with sensors and actuators that determines 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** New York City, NY
Pair prog. on software, comp. vision, and machine learning

2015 **ABB - Software Development Intern** Ladenburg, Germany
Developed four industrial demos on Oculus and Leap Motion

2014-2015 **JetBrains - Product Ambassador** Zurich, Switzerland
Organized events and code challenges to promote SW products

2012 **University of Maine - Research Assistant** Orono, ME
Built a low cost harmonic radar system for detecting wood frogs