

Keith Arie Becker

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Creative and collaborative embedded hardware and software engineer with over 5 years of professional experience in electrical and mechanical design, in a variety of engineering industries and skills. Including: modern digital electrical systems, software and hardware programming for microcontrollers and PLC equipment, sensors, 3D CAD and PCB design, wireless and internet connectivity design. Industries include aeronautical fuel tank maintenance equipment, embedded hardware design for IoT devices, and the HVAC heat exchanger industry. I also have experience with unmanned aerial systems design and operation.

EDUCATION

Vanderbilt University – Nashville, TN

May 2012

BS, Mechanical Engineering

- 1st place award for 2011 IMAV (International Micro-Aerial Vehicle) contest senior design-team paper: *"A Biomimetic Wing-Actuation Mechanism for Micro Aerial Vehicles."*
- FIRST Robotics Instructor

RELEVANT TECHNICAL SKILLS

• **COMPUTER SCIENCE:** C | C++ | Java | JavaScript | Node.JS | Python | PHP | UI/UX Design | Microsoft Visio | Microsoft Office Suite | HTML5 | CSS | Web Development

• **CAD:** Autodesk Fusion 360 | Autodesk Inventor/AutoCAD | CATIA v5 | Altium PCB | EAGLE | SPICE | MATLAB | LabView | FEA/FEM and CFD Analysis | 3D Printing | CNC | Unreal Engine 4

• **EMBEDDED HARDWARE :** AVR, STM, PIC Microcontrollers | Unitronics PLCs | Ladder Logic | Visilogic

RELEVANT WORK EXPERIENCE

Vertex Design Studios – Memphis, TN

Owner, Electrical Product Developer

2015 – Present

Began a freelance business in 2015 where I provide electrical engineering design for customers worldwide. I grow the business through online contract bidding as well as referrals from past clients. Projects skills include: Schematic and PCB design, embedded hardware systems and sensors, automation, web server integration, website development, Internet Of Things (IoT) devices, LCD and GUI interfaces, motor and power system design, UAV flight controller design, BLE wireless/RF communication, and hardware communication protocols.

Coilmaster Corporation – Moscow, TN

Application Engineer

March 2018 – December 2019

Coilmaster is an OEM international provider of HVAC heat exchanger units and psychrometric testing for a variety of

commercial and industrial customers. As an application engineer, I was responsible for the design process which included: performance and cost optimization, advising clients on requirements and industrial scale projects, and CAD design for CAM and sheet metal manufacturing. I also worked closely with our manufacturing and machining facility to produce quality results.

Aerowing, Inc. – Nashville, TN

Design Office Project Manager

May 2011 – August 2013

Aerowing is a small aerospace MRO company providing fuel tank leak detection and repair support to both U.S. military operations and commercial aircraft manufacturers. I was responsible for the entire project planning and manufacturing design of pneumatic, PLC-driven equipment. My responsibilities also included: presenting new products and optimized designs to customers, writing specifications, budgets, safety, working with vendors, machining and mechanical design, documentation and technical manuals, design for aerospace-grade industrial processes and equipment, and high sensitivity equipment.

Other

- Certified Private Pilot
- Open Water Diver