

Ashwin Kuppahally

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EDUCATION

The University of Texas at Austin

Austin, TX

Bachelors of Science, Electrical and Biomedical Engineering

May 2027

- Rising Junior
- Coursework: Computer Architecture, Systems Design, Circuit Theory, Network Analysis, Biomedical Design
- GPA: 4.00/4.00

EXPERIENCE

Electronics Design Engineer

Aug 2024 – Present

Longhorn Racing Electric

Austin, TX

- Designed high-voltage circuit boards for charging 600V car battery
- Wrote embedded software enabling car power systems and CAN communication
- Modeled car charger box assembly in Solidworks
- Managed safety systems for battery voltage control

Engineer and Product Developer

Aug 2024 – Present

All Eyes

Austin, TX

- Designed affordable phoropter to increase eye-health availability
- Worked on patented liquid lens system
- Developed electronics for automated prescription checker

Electronics Design Research Intern

Dec 2022 – Sep 2023

Stanford University Medical Research

Palo Alto, CA

- Created direct brain interface PCB for mice experiments
- Designed and manufactured experimental microscope for imaging neurons
- Presented work to researchers and iterated designs

Education Assistant

May 2023 – Aug 2024

Maker Nexus

Sunnyvale, CA

- Taught over 500 elementary school children STEM classes in electronics, 3D design, and woodworking
- Design curriculum for summer courses
- Served underprivileged communities with free classes and events

PROJECTS

Blood Assay Analysis Device | *KiCad, Solidworks, Ansys, Festo Fluid Dynamics*

March 2024 – Present

- Designed ground up blood analysis device to test assays of at-home hemodialysis patients
- Created high-power PCBs to perform light analysis of blood samples
- Modeled microfluidic components in Solidworks for blood movement and performed fluid analysis

AI Powered Wearable Training Device | *KiCad, Solidworks, 3D Printing, Arduino*

May 2023 – Sep 2023

- Designed wearable smart device with custom PCB and sensors with Bluetooth telemetry connectivity
- Utilized deep learning model to make estimates of VO2 max based on blood oxygen and heart rate
- Modeled 3D printed housing in Solidworks and manufactured device out of composite materials

The North American Regional Carbon Flux Model | *TensorFlow, Keras, Anaconda*

Dec 2020 – Jan 2022

- Created algorithm to predict carbon flux using environmental data and historical trends
- Utilized neural network and advanced data sourcing to perform analysis
- Research completed with the Environmental Engineering Department at NASA

Other projects: ashwink.org/projects

TECHNICAL SKILLS/ACHIEVEMENTS

Skills: CAD (Solidworks), PCB design, STM32 MCUs, embedded systems software, Spice, Verilog, wireless chip communication/telemetry, circuit analysis, metal CNC, 3D printing, electronics manufacturing, finite element analysis, fluid dynamics, structural design, composite materials, MATLAB, C++, data analysis, machine learning

Achievements: Synopsys Research - *4th Place in state*, USAYPT - *Schwartz Award*, FRC Robotics - *Engineering Award+International Qualification*, TEAMS - *National Qualification*