LIBBY ALBANESE

Goal-oriented Hardware Engineer with a background in Mechanical Engineering, specializing in electromechanical integration and printed circuit board design.

Phone No: (203) 501-3753
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Portfolio: libbyalbanese.com

EXPERIENCE

H2Ok Innovations – An IoT Analytics Startup in Greentown Labs

Hardware Engineer III | Aug 2021 – Present

- Designed printed circuit boards for industrial environments, taking them from ideation to production, including schematic design, layout, routing, soldering, testing, and iteration
  - Routed low speed digital, USB, Ethernet, DSI/CSI lanes, RF traces, etc.
- Optimized full electronics system of product for additional features and improved reliability
  - Expanded range of industrial communication protocols via transmission gateway motherboard
  - Broadened optical sensing capability of industrial liquid sensors
- Independently managed & delivered multi-phase projects, interfacing with multiple interdisciplinary teams along with contractors and manufacturers
- Defined strategic direction in the face of ambiguity by guiding priorities & vision as company fundraised a seed round

Tufts Nolop Fabrication, Analysis, Simulation, and Testing Facility

Fabrication Specialist | Sept 2019 – May 2021

- Educated undergraduate & graduate students in the use of 3D printers, laser cutters, & hand tools
- Led workshops teaching fabrication and software skills

Tufts Mechanical Engineering Department

Teaching Assistant | Jan 2020 – May 2021

- Courses include Mechanics II (Dynamics), Electronics and Robotics, Instruments and Experiments, Engineering Education Design

Robotics, Locomotion, and Biomechanics Laboratory,
PI: Dr. Woodward

Undergraduate Research, Climbing Robot| Dec. 2020 – May 2021

- Designed a robotic system to mimic evolution by making small adjustments to the structure & function of an RC car to allow it to climb flat, curved, or bent vertical surfaces

Tufts Center for Engineering Education & Outreach

Teaching Fellow, STOMP | Sept. 2017 – Dec 2019

- Developed a STEM-based curriculum for elementary school students
- Taught students once a week and mentored them in engineering

Teaching Assistant, Grad. Level Courses | Sept. 2018 – Aug 2020

- Supported K-12 educators in Engineering Education online courses

EDUCATION

Tufts University, Medford, MA | May 2021

BS in Mechanical Engineering & Biomedical Engineering Design

GPA: 3.55, *magna cum laude*

SUMMARY OF SKILLS

Design Software

KiCad, SolidWorks, Onshape, Adobe Illustrator & Photoshop, Adobe Premiere

Fabrication:

Soldering, Manual Mill, Drill Press, Band Saw, Power Tools, 3D Printing

Programming Languages:

Python, C++, MATLAB, LabVIEW

Engineering Education:

EV3 MINDSTORMS, Spike Prime, Scratch, BlocksCAD, TinkerCAD

Languages:

American Sign Language (Proficient)

PATENTS

Lu, Lu, Sanchez, Gutierrez, Liu, Pesek, Haywood, Albanese. 2021. Methods and systems for monitoring fluids. US2022/0170850, filed Nov. 29th, 2021. Patent pending.

LEADERSHIP & OUTREACH

Norwalk Havoc Robotics League:

Referee

March 2023 – Present

- Referee combat robotics tournament

Tufts Robotics Club:

President, Treasurer

Sept 2017 – May 2021

- Designed, fabricated, & coded both competition & personal robots
- Managed club projects, oversaw club operations
- Expanded membership from 10 to 50
- Increased budget from ~$4K to ~$20K

3Ps Theater Group

Lighting Designer, Electrician

Sept 2017 – May 2020

- Designed & executed a complete vision for a theater production
- Collaborated with other designers