# AHARON SEBTON

SEEKING POSITION UTILIZING TWO YEARS OF ELECTRICAL ENGINEERING PROFESSIONAL EXPERIENCE

## CONTACT

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## EDUCATION

**Rochester Institute of Technology**
BS and MS dual degree in Electrical Engineering earned May 2023
Focuses in Robotics and Image & Signal Processing
Immersion in Music
3.53 GPA

## LANGUAGES/TOOLS

- Jama
- ROS
- Python
- C & C++
- OpenCV and PCL
- MATLAB & Simulink
- R
- Assembly
- Verilog
- VHDL
- SolidWorks, AutoCAD, Inventor
- Altium Designer
- Quartus Prime
- SPICE

## SKILLS/CERTIFIED

- Requirements Management
- Safe LRU Design
- Wire Harness Design
- Grounding, Bonding and Shielding
- Circuit Design and Analysis
- CAD Design
- Root Cause Analysis
- Lean Six Sigma Yellow Belt
- Circuit Simulation
- PCB Rework
- Computer Vision
- Neural Networks & Machine Learning
- Robot Kinematics and Dynamic Analysis

## HOBBIES

- Rock Climbing / Bouldering
- Singing
- Guitar
- Hiking
- Cooking

## WORK EXPERIENCE

### ELECTRONIC SYSTEMS DESIGN AND ANALYSIS ENGINEER

**The Boeing Company** | Nov 2023 - Present

- Coordinates with customers and suppliers to develop seat electrical systems and components that meet customer needs and comply with regulatory requirements
- Oversees the plan and execution of component qualification efforts for several seat programs at one time
- Analyzes technical data to ensure that all electrical components will function as intended and to prevent any safety hazards in the aircraft cabin environment
- Supports and validates testing of new electrical components and systems
- Collaborates with internal and external stakeholders to improve team processes, meet commitments, and drive functional excellence

### BIOROBOTICS/CYBERNETICS TEACHING ASSISTANT

**Rochester Institute of Technology** | Jan 2023 - May 2023

- Led instruction of and supervised biorobotics lab experiments
- Guided students regarding homework, lab reports, and final projects
- Provided troubleshooting assistance with biosignal acquisition devices/software

## CO-OP EXPERIENCE

### HARDWARE QUALITY AND RELIABILITY ENGINEERING INTERN

**Amazon Robotics** | July 2022 - December 2022

- Communicated with subject matter experts to learn the most common hardware failures seen in the field, and potential methods to diagnose failed units
- Researched and selected measurement and testing equipment for purchase
- Built test stations and wrote test procedures for the new Failure Analysis lab
- Performed root cause analysis on failed units and worked with suppliers to launch long-term solutions to identified failure modes

### HARDWARE DESIGN ENGINEERING INTERN

**Collins Aerospace** | Jan 2020 - July 2020

- Member of a process-oriented hardware test and development team
- Assisted in troubleshooting, revision, qualification testing and FAA approval of flight deck control panels for commercial and firefighting aircraft
- Documented requirement-based testing using Jama, reworked PCBs, updated PCB schematics using DxDesigner, and tracked document changes using Subversion version control software

## PROJECTS

### BIN PACKING ROBOTIC SYSTEM (GRADUATE PAPER)

PyTorch, Point Cloud Library, Python | github.com/sebtona/bin-packing-robotic-system

- Repurposed hand-eye calibration and GR-ConvNet based grasping techniques for Sawyer arm robot
- Automated generation of 3D point cloud models for objects picked up by robot
- Built bin, designed and 3D printed objects of varying dimensions for experimentation
- Developed code to pack objects in bin with desired location and orientation

### GESTURE CONTROLLED DRONE SIMULATION

TensorFlow, Flightmare, ROS | github.com/sebtona/gesture-controlled-drone-simulation

- Captured dataset of biosignals for fifteen different hand/arm gestures
- Researched and implemented biosignal preprocessing and feature selection techniques
- Developed novel machine learning model to accurately classify hand/arm gestures
- Created pipeline to observe gestures, classify them, and maneuver drone in simulation environment, all in real time

### SAWYER MOBILE DEVICE INTERACTION

Fusion 360, Python & ROS | github.com/sebtona/sawyer-mobile-device-interaction

- Enabled 7-DoF robotic arm Sawyer to safely perform single and multi touch gestures on mobile devices
- Designed and 3D printed custom end effector for Sawyer
- Developed Python scripts to actively sense force applied to screen and perform each gesture