Jessica Henson

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EDUCATION

Johns Hopkins University
Whiting School of Engineering EP, Class of 2026
M.S., **Robotics and Autonomous Systems**
GPA: 4.0

Cornell University
College of Engineering, Class of 2024
B.S., **Electrical and Computer Engineering**
GPA: 3.5; Dean's List f21, s22, f22, f23, s24

RELEVANT COURSES

Kinematics/Dynamics | Robot Motion Planning | VHDL | OOP | Discrete Structures | Machine Learning | Functional Programming | Embedded Systems | Networks /Algorithms | Computer Architecture | Microcontrollers | Nano Robotics

SKILLS

Languages: Java | Python | C | C++ | OCaml | Verilog | VHDL | MATLAB | R | VBA
Hardware: Raspberry Pi | Arduino | FPGA | Development Board | Soldering | Oscilloscope | Function Generator
Technologies: ROS | PyTorch | TensorFlow | Linux | Ubuntu | Github | Docker | Vivado | AWS | RVIZ

EXPERIENCE

- **Radio Frequency Engineer,** ThorheedTitan **09/24 - present**
  Simulate ITU antenna and propagation patterns in python; Develop R scripts to automate Visualyse analysis; Review RF system data during migration from legacy to modern spectrum software platforms; Validate RF system data for NTIA Redbook and Navy compliance in support of SPS certification; Apply expertise in antenna theory, modeling, and spectrum allocation
- **Project Lead,** Engineers Without Borders **02/21 – 05/24**
  Creating an open source autonomous UGV/UAV system to identify Northern Leaf Blight
  Project Lead - Managing finances, overseeing software dev and AWS machine learning algo
  Hardware Sub team Member - building the JPL Open-Source Mars Rover using a Raspberry Pi, Arduino, a wide lens RPi camera, and 12V motors; Programming using Ubuntu, ROS, SLAM and Python; Researching IR drone cameras and programming controls from drone flight computer
- **Embedded Software Intern,** Sandia National Laboratories **05/23 - 08/23**
  Programmed quantized neural networks using PyTorch and Brevitas in Python and designed fourier transforms using Xilinx for ImageNet datasets on FPGA boards including the PYNQ-z1
- **Controlled Environment Hydroponics System** **10/23 - 05/24**
  Built a 12"x12"x16" controlled environment hydroponics systems with a Raspberry Pi Pico and RP2040 in C/C++; Used multi-core programming to integrate various sensors, including one-wire and analog sensors, and actuators to optimize growth using PID controllers
  Published *in AgriTech Tomorrow* *04/18/24*
- **Minesweeper** **08/22 - 12/22**
  Programmed a multi-thread interactive, terminal based version of Minesweeper with OCaml, implementing various commands such as modes, open, flag, help, auto-flag, verify flags, stats, and leaderboard Extensive use of Github and pair programming on VS Code for collaboration of four-person team
- **Depth First Search Maze Solving Robot** **08/22 - 12/22**
  Built and programmed a maze solving robot in C, listens for a frequency to begin and navigates the maze with ultrasonic sensors and PID controls until it detects two infrared lights and transmits frequencies back to a base station using RF transceivers