ResCon Technologies, LLC is hiring a Machine Learning Developer

As a Machine Learning (ML) Developer, you will be responsible for integrating ResCon's revolutionary ML code into priority systems of interest.

Opportunity Description

ResCon is seeking an ML Developer to help create models of complex systems. ML-based models will be deployed to embedded computing hardware to facilitate adaptive control, predict health and status, and provide actionable insights to users. Current focus areas include unmanned aerial systems (UAS) autopilots, inertial measurement units (IMUs), and integrated power, propulsion, and thermal (PPT) management systems for aerospace vehicles. *This is a full-time position that requires US citizenship and the ability to relocate to Columbus, Ohio.*

Primary Responsibilities

- Research the underlying physics of novel systems of interest to ResCon's customers
- Develop physical- and machine-learning-based models of these dynamical systems
- Collaborate with ResCon's software engineers to deploy models to embedded hardware
- Design and implement experimental procedures for testing model accuracy
- Collaborate with the ResCon team to develop intuitive user interfaces for the ML models
- Compose reports on algorithm functionality for use in training new ResCon customers and future employees
- Participate in writing proposals for commercial and US Government funding opportunities related to ResCon's core capabilities
- Interact with customers to showcase ResCon's capabilities

Auxiliary Responsibilities

As a startup, all employees are expected to pitch in to multiple activities related to scaling the company. These include, but are not limited to:

- Taking a leadership role on current core projects
- Collaborating with the founding team on ResCon strategic planning
- Establishing and scaling new ResCon offices and engineering facilities
- Training new employees

Who We Are

ResCon Technologies is a spinout of The Ohio State University, founded in July 2020 by Brian Gyovai, a retired Air Force pilot, Dr. Daniel Gauthier, professor of physics at OSU, and Dr. Andrew Pomerance, president of Potomac Research, LLC. Our mission is to revolutionize the capabilities of edge devices by deploying extremely low-power and low-data machine learning algorithms to existing and developmental systems. ResCon's ML-augmented data fusion and state estimation algorithms form the basis of our adaptive control and health monitoring software offerings. We aim to take ML processes out of the cloud and deploy them directly on-device, putting the smarts *into* smart systems. Applications range from high-speed vehicles to autonomous robots to wearables.

<u>Who We Are Seeking</u>

The successful candidate will be key to a small team dedicated to making an impact in the edge computing and low-power ML space. They will be passionate, relentlessly curious, and willing to reinvent the status quo. We seek candidates who have a strong background in mathematics and in a technical area such as physics, aerospace engineering, mechanical engineering, or related fields.

Minimum Experience

- BS in Computer Science, Engineering, Physics, Mathematics, or related fields
- Proficiency in C/C++ and Python
- Experience in mathematical modeling and numerical simulation of dynamical systems
- Familiarity with data analysis and ML applications in C/C++, Python, MATLAB or similar

Desired Experience

- Passion for all things aerospace with experience building drones, robots, or other projects involving microcontrollers
- Professional experience developing and implementing ML algorithms
- Background in control theory, guidance & navigation, and/or data sciences, especially predictive maintenance
- Familiar with PX4, Ardupilot, Betaflight, or other open-source UAS flight stack software
- Familiar with ROS and associated robotics software

<u>Position Requirements</u>

- U.S. Citizenship is a must-have due to ongoing US Government projects
- In-person preferred, though a hybrid schedule may be considered for the right candidate