Machine Learning Scientist

Day Zero Diagnostics (DZD) is an exciting startup revolutionizing infectious disease diagnostics, by leveraging cutting-edge sample prep technologies, whole genome sequencing and machine learning. We are building the next generation of IVDs, able to perform comprehensive bacterial species ID and antimicrobial resistance and susceptibility (AMR/S) profiling in less than 8 hours of sample receipt, without the need for culture.

Our first application is for Sepsis. Sepsis is responsible for about a third of hospital deaths and costs hospitals in the US about $24B annually. Using the current culture-based approach for pathogen ID and AST that takes 2-5 days and has a 40% failure rate, patients with Sepsis are treated with broad-spectrum antibiotics, leading to significant toxicity, higher rates of organ injury, increased risk of *c. difficile* infection, and contributing to the growth of the antibiotic resistance problem, globally.

By providing an accurate and comprehensive diagnosis within the first cycle of treatment, patients can get appropriate antibiotic therapy for systemic infections such as sepsis, reducing hospital treatment durations and costs.

At Day Zero Diagnostics we are passionate about our mission of modernizing infectious diseases diagnosis and treatment. Employees gain experience in a multidisciplinary and fast-paced start-up, and have ample opportunities to acquire new skills, engage with emerging technologies, work closely with our accomplished team, and communicate their results, all while working in a supportive and energetic environment.

Primary responsibilities:

- Develop, improve, and maintain code for feature set creation, model training, and performance analysis for relevant machine learning tasks
- Build statistical and analytical tools to support machine learning models and general analytical needs across the company
- Search the scientific literature for solutions to research questions and adapt the state of the art to the problem at hand
- Provide expertise in machine learning and statistical analysis best practices
- Maintain organized, tested code and corresponding documentation
- Present data and results to internal stakeholders and outside of the company at meetings/conferences/etc
- Write, edit, and submit manuscripts/abstracts/grants detailing the results of research projects
- Work closely within the data science team and with outside collaborators
- Maintain close communication with the team regarding progress

Qualifications:

- PhD in computer science, machine learning, computational biology, or an equivalent quantitative field.
- Fluency in in Python, SQL, and Linux
- Dedication to coding best practices
- Mastery of statistical/machine learning foundations and best practices
- Fluency with the Python data science and machine learning ecosystem: NumPy, PyPlot, scikit-learn, TensorFlow/PyTorch, etc.
- Familiarity with biological sequencing data analysis helpful, but not required
- Enthusiasm for learning about and solving problems in a new field
- Highly motivated and independent, with the ability to in a dynamic team environment
- Strong oral and written communication skills