InfernoGuard

Internship Opportunities - Summer 2022

InfernoGuard is revolutionizing remote wildfire detection for large scale landowners at risk. We aim to provide landowners in remote, fire-prone locations with prompt notification of wildfire risk to minimize damage while protecting valuable land and ecosystems. We eliminate reliance on word of mouth detection by creating a network of devices that continuously gather environmental data to determine and track wildfire presence, protecting landowners from growing wildfire threats.

Our team hails from universities across the country (Johns Hopkins University, Northwestern University, and Lehigh University) to bring 15 dedicated team members to minimizing wildfire threats across the globe – we've generated over 400k in non-dilutive funding, and are expanding our technology development team as we move towards bringing our solution to landowners in need.

Environmental Research Intern

Biography

The first step to InfernoGuard's holistic wildfire detection and notification solution is our wildfire risk assessment, where landowners receive a color-coded, intuitive map of wildfire risk on their property.

Our team has developed a few iterations, and as the team has fluctuated over time, we are looking to hire new members to lead development.

Our assessment pulls environmental and topographical data from satellite imagery and data sets online, layers these factors through GIS software, and incorporates machine learning principles to drive accuracy.

Responsibilities

- Conduct a combination of internet and literature searches to investigate environmental factors that contribute to wildfire ignition
- Research existing factors in the model and identify additional components if expanding scope is necessary
- Integrate environmental findings to hardware development and apply environmental criteria to detection algorithm
- Collaborate with Data Science & Machine Learning leads to identify key environmental factors and implementation strategies into the model
- Read, synthesize, and present environmental research findings to executive team to drive development of wildfire risk assessment model

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Data Science / Machine Learning Engineer

Biography

InfernoGuard is working on further developing our wildfire risk assessment model. This model will predict where fires are most likely to start on a given plot of land. It takes various environmental factors into consideration.

Responsibilities:

- Develop an updated version of our current risk assessment model
  - Read and implement current machine learning research papers in the application of fire detection
  - Learn how to use GIS as a database
  - Verify ML model with environmental researcher
  - Create a backtesting framework for the ML model
  - Add functionality to update ML model based on data collected from IOT devices

Requirements

- Experience working on Data Science / Machine Learning Projects
- Algorithm and data structures design and analysis
- Knowledge and experience of Python3 Pandas, Numpy, and TensorFLow

Bonus Points

- Experience with QGIS or other GIS software
- Knowledge of applications of optimization problems
- AWS Cloud experience