NICHOLAS GARDNER

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EXPERIENCE

MLOps/Infrastructure Intern

National Grid

June 2023 – August 2023 | Waltham, MA

- Added functionality for and resolved issues in shared team conda package. This added functionality primarily involved interfacing with Azure cloud systems.
- Assessed Azure Machine Learning as a potential enterprise analytics platform.
- Created a system for automatically provisioning and modifying compute instances for use as a dynamic development environment.
- Analyzed product order history to identify trends and predict future requirements.

Machine Learning Engineer Co-op

Golisano Institute for Sustainability

August 2020 – May 2023 | Rochester, NY

- Implemented a complete system for LED health assessment from images of printed circuit boards, using OpenCV and PyTorch. This system was presented at the 2023 REMADE conference in the paper: “Image-based Methods for Inspection of Printed Circuit Boards”.
- Designed machine learning models for gear prognostic health monitoring using PyTorch, Keras/Tensorflow, and Sklearn.
- Created a system for localization and health assessment of CT scans of solder joints, using OpenCV and PyTorch.
- Designed and implemented a genetic algorithm to explore hyperparameter space for asymmetric autoencoders. This search algorithm, which was implemented in parallel to improve model training efficiency, more quickly converged to optimal values and allowed for analysis of broad model trends.
- Utilized software design principles to build and redesign internal libraries.

Computational Software Algorithm Development Co-op

Spectral Sciences, Inc.

August 2021 – December 2021 | Burlington, MA

- Designed and implemented data classes for atmospheric datasets.
- Created custom interpolation to combine datasets for integration into SSI’s Standardized Atmospheric Generator (SAG).

PROJECTS

Gym Tracker

Personal

October 2022 – Present

- Scrapes RIT’s facilities website to display current and historical gym occupancy. Uses Google Cloud Run to automate scraping with BeautifulSoup4, Google Firebase to store data, and a Plotly Dash Flask app hosted on Heroku to render. Predicts future data using Facebook AI’s Prophet.

SUMMARY

6th year computer science BS/MS student at RIT, graduating in December 2023, looking for a full-time data science / machine learning position starting in spring 2024.

EDUCATION

M.S. Computer Science

Rochester Institute of Technology

January 2023 – December 2023 | GPA: 3.83

B.S. Computer Science

Rochester Institute of Technology

August 2018 – December 2022 | GPA: 3.83

SKILLS

Python | Java | C/C++ | PyTorch | Tensorflow | Keras | Scikit-Learn | OpenCV | Matplotlib | NumPy | Pandas | SciPy | SQL | Git | Unix | Google Cloud | AWS | Azure

COURSEWORK

- Neural Nets and Machine Learning
- Topics in Intelligent Systems: Intelligence for Autonomous Vehicles
- Introduction to Computer Vision
- Advanced Computer Vision
- Introduction to Artificial Intelligence
- Introduction to Machine Learning
- Biologically-Inspired Intelligent Systems
- Principles of Data Mining
- Analysis of Algorithms
- Foundations of Networks
- Principles of Data Management
- Advanced Database Implementation: NoSQL/NewSQL
- Concepts of Parallel and Distributed Systems
- Foundations of Cryptography