

Will Hord

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Experience

NASA

Greenbelt, MD

Junior Machine Learning Engineer – Contractor

September 2024 – Current

- Leading the development, training, and testing of machine learning models for the classification of exoplanet candidates using time series light curve data, improving detection accuracy and efficiency.
- Designing and implementing a data pipeline to automatically process and analyze new TESS telescope data, streamlining the detection of exoplanet candidates and prioritizing them for further study.
- Created a comprehensive dataset of tens of thousands of exoplanet light curves, non-planetary light curves, and false positive eclipsing binary star system data ensuring high quality input for model training.

Dairy FIT

Remote

Machine Learning Engineer Intern

June 2024 – September 2024

- Contributed to the development of machine learning models for analyzing cows using 3D scans and images, aimed at helping farmers make informed decisions on livestock management.
- Engineered and optimized deep learning models and pipelines for semantic segmentation of LiDAR data, leveraging state-of-the-art 3D machine learning techniques.
- Completed advanced training in 3D machine learning and computer vision, focusing on the end-to-end process of handling 3D data such as point clouds, voxels, and LiDAR data.

University of California Santa Cruz – School of Engineering IT Department

Santa Cruz, CA

Junior Software Engineer

June 2021 – July 2023

- Sole engineer responsible for the development and maintenance of 50+ websites.
- Leveraged Python, JavaScript, and Bash scripting for site creation to reduce development time and cost by more than 25%.
- Upgraded and optimized more than a dozen Drupal sites and generated reusable PHP skeleton code for custom web modules, improving site performance and scalability.
- Developed new methods for upgrades and migrations to newer Drupal versions, presented solutions to software developers across the University of California system, improved cross-campus collaboration and efficiency.

IBM Watson Research Center

Yorktown, NY

Machine Learning Research Intern

June 2018 – February 2019

- Led two machine learning medical detection research projects for high-risk patients, improving prediction accuracy for psychosis and drug abuse.
- Published and presented research at the February 2019 SPIE medical imaging conference.
- Designed and implemented a Python-based program with TensorFlow and Scikit-learn to efficiently assess and compare multiple classification and regression models on large datasets, reducing model selection time and improving overall model accuracy by over 15%.
- Engineered data cleaning and formatting tools that enhanced machine learning model accuracy by 20% through streamlined preprocessing, ensuring more reliable and consistent results.

Pelham School District

Pelham, NY

Technology Office Intern

May – June 2019

- Coordinated technical logistics for district-wide virtual STEM conference attended by over 2000 students and educators.

Education

University of California Santa Cruz - Baskin School of Engineering

Santa Cruz, CA

Bachelor of Science in Computer Science

2023

Certifications

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| • Deep Neural Networks with PyTorch - IBM | 2023 |
| • 3D Deep Learning – 3D Data Academy | 2024 |

Awards & Publications

Predicting Conversion to Psychosis in Clinical High Risk Patients using Resting-State Functional MRI Features

SPIE. Jolie McDonnell, **William Hord**, et al. March 2019

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| • Westlake Regional Science Fair – 3rd Place – Testing Quantum Encryption Protocols in Real-life Situations Using Secure Quantum Tunnels | 2018 |
| • Eagle Scout – Organized and led service project to build an outdoor classroom at local elementary school to teach students about ecological issues and sustainability | 2018 |

Skills

Languages: Python, C++, C, JavaScript, PHP, HTML, SQL (MySQL, Postgres, SQLite), Rust

Technologies: PyTorch, TensorFlow, Django, Flask, Rest APIs, GraphQL, React JS, React Native

Tools & Other: Git, Linux, Cloud (AWS, GCP), Terraform