

Javon Kitson

www.javonkitson.com

Experience

BlueHalo, Germantown MD

Research Engineer III, February 2023 – Present

- Head administer to the company's AI/ML cluster, streamlining GPU resource allocation for ML training.
- Automated infrastructure provisioning using Terraform, reducing manual deployment time.
- Designed and deployed React-based applications, improving internal tool performance and usability.
- Built and optimized multi-node ML training pipelines, enabling seamless experimentation and rapid model iteration.
- Specialized in training and fine-tuning high-performance machine learning models.
- Spearheaded model fine-tuning and scaling workflows across GPU clusters, enhancing model performance.
- Developed an internal system to distribute datasets and models, improving efficiency and scalability.

Intelligent Automation Inc., Rockville MD

Software Engineer I/II, July 2020 – Acquired by BlueHalo February 2023

- Designed and developed full-stack components for Web Applications using React, JavaScript and Python.
- Dockerized applications for seamless deployment on remote servers.
- Implemented CI/CD pipelines to automate testing and deployment, reducing integration times.

Constant Advancement, Alexandria VA

Research Assistant, December 2018 - August 2019

- Assisted on projects focused on web application architecture and security.
- Worked on both front-end and back-end development of secure applications with a focus on web application architecture, caching technologies, and security mechanisms.

Projects

[Geoestimation](#) (Python)

- Implemented a custom data pipeline to normalize, resample, and preprocess large satellite images for training.
- Developed and trained an EfficientNetB7-based UNet model in TensorFlow to accurately extract building footprints from RGB-PanSharpen imagery.
- Converted GeoJSON polygons into binary masks for supervised semantic segmentation.
- Calculated per-building area and perimeter in real-world units by applying contour analysis and leveraging ground sample distance.

[Simple-Neural Architecture Search](#) (Python)

- Engineered a neural architecture search framework implementing ENAS, and a hybrid PNAS+ENAS approach.
- Built modular architecture space supporting 8 neural network types (CNN, MLP, ResNet, MobileNet, DenseNet, ShuffleNetV2, EfficientNet) with dynamic layer configurations.
- Implemented parameter sharing, distributed GPU training, and visualization tools for faster architecture discovery.
- Created interactive Streamlit interface for visualizing search results and architecture performance metrics.

[Deep Reinforcement Learning Stock Trading](#) (Python)

- Utilized Deep Reinforcement Learning to develop and implement an autonomous stock trading system.
- Managed a robust feature store for efficient machine learning feature retrieval.
- Designed and deployed infrastructure monitoring dashboards to track real-time metrics and performance indicators.

Skills

Programming Languages: Python, C, Java, JavaScript

Machine Learning: TensorFlow, PyTorch

DevOps: Docker, Kubernetes, Nginx, Terraform, Git, MLflow

Cloud & Cluster Management: AWS, SLURM

Frameworks & Tools: React, Angular, Vue, Flutter, Node.js

Education

University of San Diego, San Diego, CA

Master of Science in Applied Artificial Intelligence, Graduated May 2024

Loyola University Maryland, Baltimore, MD

Bachelor of Arts in Computer Science, Minor Biomedical Physics, Graduated May 2020