David Robinson

davidrobinson.info drobinson4105@gmail.com linkedin.com/in/davidrobinson05 github.com/DRobinson4105

Education

University of Central Florida December 2026
Bachelor of Science in Computer Science, Intelligent Robotic Systems Minor *3.93 GPA*

Certifications: AWS Cloud Practitioner, AWS Solutions Architect

Awards: UCF Principal's Honor List, UCF Dean's Honor List x4, Florida Academic Scholar (Bright Futures)

Relevant Coursework: Computer Vision, Data Structures and Algorithms, Artificial Intelligence, Linear Algebra

Technical Skills

Languages: Python, C/C++, SQL, Java, JavaScript, R, LaTeX
Machine Learning: PyTorch, TensorFlow, Scikit-Learn, Transformers, Sentence-Transformers, ONNXRuntime, OpenCV, YOLO, MMDetection, TorchScript
Tools and Platforms: AWS, Docker, Kubernetes, Flask, Git, MongoDB, MySQL, PostgreSQL, Pandas, NumPy, Matplotlib

Experience

Machine Learning Intern Remote
Contract (Confidential) *March 2025 – Present*

- Designed and trained a neural network using letter, phoneme, and metaphone sequences with Embedding-LSTM modules and an MLP, achieving **90.7%** accuracy and **93.59%** precision on string similarity classification.
- Built a dataset of **4000+** labeled string pairs and engineered feature extraction pipelines including tokenization, phoneme and metaphone generation, sentence embedding cosine similarity, and Levenshtein distance.
- Deployed an **ONNX**-optimized model into a Flask API for real-time inference, accelerating predictions by **4**× through preprocess batching, fuzzy match pruning, JIT compilation, and C++-backed operations.

Undergraduate Researcher Orlando, FL
UCF Center for Research in Computer Vision *August 2024 – Present*

- Built a custom dataset of **1,036** video samples of stroke patients performing Box and Block Tests, segmenting videos into 30-frame clips for temporal action classification.
- Fine-tuned and benchmarked neural networks (R3D, R2Plus1D, Video Swin Transformer, Video MViT, MotionBERT, PoseConv3D, MS-G3D) for movement analysis, achieving up to **90.18%** accuracy across different seeds.

Projects

SimplyASL | *PyTorch, Swift, Flask, OpenCV, OpenAI, Langchain, NumPy*

- Deployed **Meta AI's Sapiens Pose Estimation** model to generate 2D pose representations of ASL.
- Trained an LSTM-based model to generate intermediate frames between ASL signs for smoother transitions.
- Implemented **few-shot prompting** techniques to improve English-to-ASL Gloss translation using OpenAI's GPT-4 Seq2Seq model.

Accelify | *PyTorch, MongoDB, Pandas, NumPy, Scikit-Learn, Flask, Python*

- Built and trained a PyTorch neural network combining **embedding layers**, **LSTM-based sequence modeling**, and **fully connected layers** to recommend ServiceNow Technical Accelerators, achieving a **95.83%** reduction in loss.
- Created a recommendation dataset using TF-IDF, co-occurrence matrices, and scoring mechanisms with **150+ entries** of sample company and ServiceNow product information.

BookMate | *PyTorch, Selenium, NextJS 13, Flask, Python, R*

- Leveraged **R** to track loss and accuracy curves for hyperparameter tuning and performance optimization.
- Trained the **YOLOv8** model on filtered barcode datasets, achieving **98.3 mAP** for identifying ISBNs.
- Built a PyTorch regression model to determine optimal selling prices for books, reaching **3.9 MSE Loss**.

Campus Involvement

UCF Programming Team Orlando, FL
Member *Sep 2023 – Sep 2024*

- Achieved **4th place** in the 2023 **ICPC North America South Regional** Contest out of **100+ Teams**.
- Created and judged problem sets for the UCF High School Programming Contest for **80+ teams**.