Rowan Torbitzky-Lane

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Education

B.S. Computer Science - Minor in Mathematics - *Summa Cum Laude* — December 2024

Skills

- PyTorch
- YOLO
- C++
- Rust
- Docker
- HuggingFace
- Django
- Godot
- Evolutionary Computing
- SQL
- MATLAB
- Linux
- CUDA
- Anaconda
- Haskell
- timm
- Firewalld
- Numpy
- AI
- Pandas
- Slurm
- LaTex
- Nix
- Clojure

Experience

NSF Research Assistant - *Missouri University of Science and Technology* — May 2024 - October 2024
- Train novel, bi-directional LLMs on Genome Sequences to correct errors in reads
- Clean and analyze textual data with Scikit-learn and Scikit-bio
- Incorporate huggingface library for model testing

Research Assistant - *Center for Intelligent Infrastructure* — May 2023 - October 2023
- Calculate Optical Flow with MATLAB and C++ utilizing Slurm on campus HPC
- Coordinate Web Requests with Django to interact with internal PostgreSQL server
- Improve frontend with Typescript, such as adding video upload capability
- Extract image features using OpenCV such as utilizing optical flow to predict annotations in subsequent video frames
- Perform Annotations for image segmentation Convolutional Neural Networks

Data Science Co-Op - *Hunter Engineering Company* — January 2022 - August 2022
- Achieve mAP50-95 of 97% with YOLO and PyTorch in license plate recognition problems
- Achieve Precision of 96% via timm's EfficientNet V2 on classifying bad data, resulting in an 10% increase in annotation efficiency
- Innovate data pipeline by automating our data downloading process, increasing efficiency by 5%
- Design APIs with FastAPI and Flask
- Containerize APIs within Docker
- Leverage Pandas and Microsoft SQL in data processing pipelines
- Implement workflows into internal Azure DevOps git repository
- Utilize Microsoft Excel for data annotation
- Store data in AWS S3 Bucket Storage

Personal Projects

Self-Hosted Linux Server - *SQL, YOLO, Docker, Firewalld, Git, Nginx, CUDA* — January 2023 - Present
- Train bird detection Convolutional Neural Networks
- Host game servers to enjoy with friends
- Troubleshoot problems when pointing domain name A records to proper IP address while ensuring router sends packets to correct LAN address

Rust Genetic Programming Framework — March 2025 - Present
- Perform pre-processing on Time Series Data
- Utilize test driven development philosophy
- Write macros for reduced boilerplate
- Utilize rust_decimal's floating point precision for increased accuracy
- Create tests to ensure proper functionality

Invited Talks

Genetic Programming in Python @ PySTL https://www.youtube.com/watch?v=ZzYi_j2IYuY — September 18th, 2025
Actix Web Framework @ STL Rust coming soon — December 4th, 2025

Extracurricular Activities

- Sigma Chi - Annotator - Composed notes at chapter meetings and ran philanthropy events
- Kappa Kappa Psi - Treasurer - Track chapter spending and organize semesterly band barbecue
- Climbing Club - Senior Member - Organize weekly trips and track signups, train new members on proper safety techniques