

Chris Dollo

Halethorpe, MD | dollochrisdavid@gmail.com | linkedin | github | Portfolio

EDUCATION

University of Maryland, Baltimore County

M.S. Computer Science

B.S. Computer Science

- **Relevant Coursework:** Advanced Algorithms, Software Engineering, Machine Learning, NLP, Computer Vision, Data Science, Mobile Computing

Catonsville, MD

Jan 2026 – Dec 2027

Jan 2022 – Dec 2025

EXPERIENCE

Machine Learning Intern

Verizon

May 2025 – Aug 2025

Catonsville, MD

- Designed and deployed an end-to-end CV pipeline using **YOLOv8** to automate equipment inspection, achieving **94% accuracy** across **14,000+ labeled images** and eliminating manual review for 3 product lines.
- Preprocessed and augmented datasets from Roboflow and Hugging Face, applying rotation, scaling, and contrast transforms – improving model robustness and **reducing false detections by 20%** in production.
- Optimized **PyTorch** training and inference workflows, cutting average latency by **35%** and enabling real-time deployment on edge hardware for factory-floor inspection use cases.
- Built automated **unit and integration test suites**, validating **100%** of production inference endpoints before deployment.

Research Assistant

UMBC Sensorimotor Control Lab (Dr. Ramana Vinjamuri)

Jan 2024 – Present

Catonsville, MD

- Architected a real-time **Python** gesture analysis pipeline using **OpenCV** and **MediaPipe**, processing **50+ gesture classes** across mudras and natural grasps to extract biomechanical motion primitives.
- Engineered Gaussian-based joint angular velocity models to derive latent “syllables of motion,” achieving **95.78%** reconstruction accuracy for natural grasps and **92.99%** for mudras – outperforming baselines by up to **10.48%**.
- Designed **EMG-based ML classifiers** (SVM, LSTM, Random Forest) for prosthetic gesture recognition; conducted ablation studies, profiling, and documentation across **multi-channel sensor datasets**.
- **Publication:** C. Dollo et al. “Reconstructing Hand Gestures with Synergies from Dance Movements.” *Nature Scientific Reports*, 2025. (2nd Author, Accepted)

PROJECTS

ASL Interpreter | React.js, Flask, MediaPipe, TensorFlow, WebSocket, Docker, AWS

Oct 2025 – Present

- Built a real-time ASL web interpreter using **MediaPipe** hand landmark detection and a **TensorFlow** classifier, achieving **91% accuracy** across 26 ASL letters in live video streams.
- Designed a **React.js** frontend that captures webcam frames and sends them to a **Flask REST API via HTTP fetch**, returning predicted ASL letters with low-latency inference.
- Engineered the **Flask** backend to preprocess incoming image frames, run TensorFlow model inference, and return structured JSON predictions consumed by the React UI.

Hellacious | React.js, Flask, MongoDB, Firebase, AWS S3, Node.js, Tailwind CSS

Oct 2025 – Present

- Designed and shipped a full-stack social media platform with **15+ active users**, following the full **SDLC** from requirements to production – including auth flows, feeds, and media uploads.
- Integrated **Firebase Auth** and **RESTful APIs** for secure session management across **3 user roles**; deployed media on **AWS S3** with lifecycle policies, reducing API response time by **40%** under peak load.
- Coordinated **Git** branching strategy across a 3-engineer team with enforced code review, maintaining a clean main branch through **100+ pull requests**.

EcoRecyclr | PyTorch, Flask, Android (Kotlin), ResNet-18, REST API

Sep 2025 – Oct 2025

- Led a **4-member team** to **1st place** at the Booz Allen Hamilton Code for Good Hackathon, delivering an Android app for real-time waste recyclability classification using on-device ML inference.
- Fine-tuned **ResNet-18** in **PyTorch** on **10,000+ images**, achieving **95% accuracy** across 5 waste categories within a **48-hour** window; architected background **Kotlin** services sustaining **60fps** UI responsiveness.

TECHNICAL SKILLS

Languages: Python, Java, Kotlin, C, C++, JavaScript, TypeScript, SQL, HTML/CSS, Bash, R

Frameworks & Libraries: React.js, Next.js, Node.js, Flask, Express.js, Tailwind CSS, PyTorch, TensorFlow, scikit-learn, OpenCV, MediaPipe, NumPy, Pandas

Cloud & DevOps: AWS (EC2, S3, Lambda), Firebase, Docker, GitHub Actions, CI/CD, Linux

Databases: MongoDB, PostgreSQL, MySQL, SQLite

Concepts: System Design, Distributed Systems, RESTful APIs, Microservices, ML/Computer Vision, SDLC, Agile/Scrum, Data Structures & Algorithms, Test-Driven Development