

JACK H. DAWSON

jack.h.dawson@vanderbilt.edu | (310) 384-8806 | linkedin.com/in/jhdaws | jhdaws.dev

EDUCATION

Vanderbilt University

B.S. Computer Science, B.S. Math | Minor: Data Science

Honors: 4x Dean's List

Membership: Change++, Kappa Theta Pi (KTP), Vandy Swim Club, Vandy Satellite Club, Vandy Asto Stargazers, Vanderbilt Hustler

Nashville, TN

Expected May 2027

GPA: 3.906/4.000

PROFESSIONAL EXPERIENCE

Change++: Be The Source

Full Stack Developer

Nashville, TN

September 2025 – Present

- Contributes to new team as returning developer; continues work of previous web project for foster parent education nonprofit
- Revamping large legacy codebase with Next.js, Firebase, and MongoDB to redesign pain point features for learning platform

UCLA Biomedical Artificial Intelligence Research Lab

Intern/Research Assistant

Nashville, TN

May 2025 – Present

- Builds predictive models (e.g. LSTM, XGBoost) in PyTorch to forecast heart failure hospitalizations from multi-modal Fitbit data
- Explores patient time-series via statistical tests, visualization, and hypothesis-driven analysis for publication in JAMIA OPEN
- Engineering data pipelines in Python (pandas, NumPy) to clean and align irregular wearable and clinical records for ML training
- Reviews literature on health models (e.g. BERT-based) and wearable data to guide model design and feature engineering

Vanderbilt ISIS: Dr. Kevin Leach's Lab

Research Assistant

Nashville, TN

January 2025 – Present

- Analyzed mislabeled document training data to reveal negative impact on model performance; results supporting a publication
- Investigating duplicate data issues and building automated detection tools to improve dataset integrity and model robustness
- Developing real-time eye-tracking data streaming software to analyze student gaze data for adaptive instructional feedback

Change++: School the World

Full Stack Developer

Nashville, TN

September 2024 – May 2025

- Collaborated as team of 12 via Git with Agile, test-driven development of app for an educational non-profit in Latin America
- Devised intuitive user flows with Expo, React Native, and TypeScript to enable reliable data entry and informative visualization
- Implemented a secure SQLite schema with role-based access and local storage + offline sync for low-connectivity zones

Vanderbilt School of Engineering

Undergraduate Grader/TA

Nashville, TN

August 2024 – Present

- Leads weekly office hours (3–4 hrs) for multiple courses (e.g. Algorithms, Programming Languages) supporting 200+ students
- Partners with professors to grade hundreds of assignments and exams, providing feedback and clarifying challenging concepts

PROJECTS

Portfolios NP and JD – Full Stack Developer

July 2025 – October 2025

- Designed dynamic portfolio sites with Next.js, Vercel, TypeScript, React; applied responsive design and reusable components
- Created a peer's portfolio, supporting editable project pages and admin-only content management for a scalable deployment

Kappa Theta Pi Resume Scanner – Full Stack Developer

March 2025 – May 2025

- Spearheaded a GPT-4–resume tool, extracting NLP features with spaCy/textstat for readability and role-specific fit analysis
- Constructed prompt-based evaluation logic and prototype web interface for future deployment; coordinated with two peers

Poker App (work in progress) – Full Stack Developer

February 2025 – Present

- Built a Python CLI tool with Segment Anything Model (SAM) to detect and count poker chips with accurate segmentation logic
- Teaming up with a peer to developing a mobile app to automate counting with the model alongside integrated payment APIs

SKILLS AND CERTIFICATES

Skills: Python, C++, Java, JavaScript, TypeScript, R, HTML/CSS, Racket, Prolog, PyTorch, scikit-learn, NumPy, pandas, React, Node.js, Next.js, Express, Vite, Expo, Jupyter Notebook, Latex, Git, GitHub, Bash, SSH, AWS, ACCRE, SQL, PC building, CPR/AED certified

Coursework: Web Architecture, Machine Learning, AI, Differential Eq, Math Logic, Software Design, Linear Algebra, Statistics

Interests: Swimming, Skiing, Lifting, Running, Fallout, One Piece, Daft Punk, Catan, Poker, Jet Lag the Game, Chicken Katsu Curry