

MARK ARMSTRONG

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EDUCATION

The University of Texas at Dallas

Bachelor of Science in Computer Science

Richardson, TX

Expected Graduation: August 2026

- Awarded the highest-level transfer scholarship of \$5,000 per year for academic excellence
- Relevant Courses: Data Structures and Algorithms, Machine Learning, Database System, Software Engineering, Operating Systems, Automata Theory, Computer Vision, Computer Graphics, Computer Networks

EXPERIENCE

Software Engineer Intern

May 2025 – December 2025

Companions Journeying Together

Remote

- Resolved 10+ GitHub tickets by debugging PHP (CodeIgniter 4) logic and monitoring real-time logs via Sentry, reducing system-wide runtime errors and improving application uptime by 15%
- Optimized MySQL database interactions for complex data modules, achieving a 30% increase in query efficiency for high-volume records involving incarcerated persons and caregivers
- Modernized development workflows by upgrading the core environment to PHP 8.4 within Docker, ensuring container stability and enabling advanced language features for system-wide performance gains
- Enhanced data integrity by 25% through the implementation of SQL validation scripts, eliminating record duplication and ensuring accurate delivery of critical program metadata
- Refactored full-stack components using HTML, CSS, and JavaScript to fix UI regressions and noticeably decrease page load times within AWS-hosted environments

PROJECTS

BiteScout | JavaScript, HTML, CSS

August 2025 – December 2025

- Engineered a mobile-first restaurant discovery engine in JavaScript using real-time filtering for personalized results
- Built a responsive frontend with HTML and CSS to simulate native app interactivity and seamless UI state updates

LibraryIQ | PHP, MySQL, JavaScript

May 2025 – October 2025

- Developed a full-stack web application using PHP with CodeIgniter (MVC framework), implementing complete CRUD functionality for managing library books
- Integrated the Google Books RESTful API for ISBN-based metadata retrieval, reducing manual data entry by 90%
- Implemented advanced features including fuzzy matching, duplicate prevention, optimized database queries, and responsive UI design for scalable performance and usability

Solubility Prediction System | Python, Machine Learning

December 2024

- Built a molecular solubility prediction system comparing Linear Regression and Random Forest models using a dataset of 1,144 compounds with four physicochemical properties
- Developed a machine learning pipeline in Python utilizing pandas, scikit-learn, and matplotlib to analyze model performance and visualize comparative prediction accuracy

Watermark Application | Python

February 2024

- Developed a Python script using the FileTools template to automate the process of adding custom text or image watermarks to multiple pictures, with adjustable positioning and transparency

TECHNICAL SKILLS

Languages: C/C++, Java, Python, PHP, MySQL, JavaScript, HTML, CSS

Developer Tools: VS Code, CLion, IntelliJ, PyCharm, Git, GitHub, Docker, AWS, Claude, Cursor

Certifications: Microsoft Office Expert Certification in Excel, PowerPoint, Word, and Outlook