

Abdullah Marwan Yassine

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Aurora, Colorado, USA

PROFESSIONAL SUMMARY

Computer Science and Applied Mathematics undergraduate passionate about system-level problem solving, machine learning applications, and building clean, responsive web apps. Seeking opportunities to contribute to cutting-edge software engineering or research teams. I thrive in collaborative environments where creativity, precision, and real-world impact intersect. My academic journey is matched with hands-on development of robust full-stack systems, cloud-integrated services, and data-driven insights. Excited to bring relentless curiosity, technical depth, and an eagerness to learn into teams building next-generation technologies.





EDUCATION

- University of Colorado Boulder** Expected May 2026
B.Sc. in Computer Science and Applied Mathematics Boulder, CO

SKILLS

- Languages:** Python, C/C++, Scala, SQL, HTML/CSS, JavaScript
- Web Development:** React.js, Node.js, Express.js, Docker, MongoDB, PostgreSQL, REST APIs
- Machine Learning:** scikit-learn, TensorFlow, PyTorch, NumPy, Pandas
- System Administration:** Linux, Shell Scripting, Networking, Virtualization (VMware), NFS, DNS, SSH
- Cybersecurity:** Wireshark, Nmap, Metasploit, Hashcat, SQL Injection Analysis
- Tools:** Git, GitHub, VS Code, Google Cloud Platform, Docker Compose

PROJECTS

- VisionQuest: Grocery Produce Classification at Checkout** Fall 2024
Python, PyTorch, KNN, VGG-16 
 - Created a real-time computer vision tool for classifying fruits/vegetables to simplify self-checkout lanes.
 - Designed and compared multiple ML pipelines; achieved high accuracy using transfer learning with VGG-16.
 - Developed preprocessing pipeline with OpenCV for improved robustness in various lighting/backgrounds.
- Renewly: Budget Tracking Web App** Spring 2025
React.js, Node.js, Express.js, MongoDB, Plaid API 
 - Full-stack web app for tracking spending, managing budgets, and gaining financial insights.
 - Developed secure user authentication with JWT and bcrypt for password protection.
 - Integrated Plaid API for real-time transaction tracking and recurring payment analysis.
 - Designed modular React components and state management for seamless user experience and dashboard updates.
 - Built automated email reminders for upcoming subscription renewals using scheduled backend jobs.
- HatHub: Hat E-Commerce Platform** Fall 2023
HTML/CSS, JavaScript, Docker, PostgreSQL 
 - Engineered a responsive full-stack web store for customizable hats.
 - Implemented shopping cart, user accounts, and admin dashboard with inventory CRUD functionality.
 - Deployed using Docker Compose with isolated containers for backend, database, and NGINX.
 - Integrated secure authentication with session handling and input validation to prevent common vulnerabilities.
 - Conducted user testing and performance profiling to optimize load times and enhance mobile responsiveness.
- Retail Insights: Customer Purchase Behavior Analysis** Spring 2025
Python, scikit-learn, pandas, Matplotlib, seaborn 
 - Mined transaction data from a UK-based e-commerce store to uncover product bundling and segmentation strategies.
 - Used the Apriori Algorithm for frequent itemset mining and generated association rules for marketing insights.
 - Applied RFM analysis, K-Means, and GMM to segment customers; visualized results with PCA-reduced 2D plots.
 - Derived actionable recommendations for loyalty programs and reactivation strategies for at-risk segments.
 - Engineered efficient data pipelines using pandas to preprocess and filter over 500,000 transaction records.
 - Collaborated with peers to validate clustering outputs and refine recommendation strategies based on business goals.

RELEVANT COURSEWORK

Data Structures, Object-Oriented Programming, Machine Learning, Advanced Data Science, Cybersecurity, Linux System Administration, Computer Networking, Operating Systems, Database Systems, Systems Programming