KAITLIN WOOD

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EDUCATION

University of Houston — Honors College — August 2022 – December 2024
Bachelor of Science in Computer Science, Minor in Mathematics — GPA: 3.9
Relevant Coursework: Data Structures & Algorithms, Operating Systems, Artificial Intelligence, Cloud Computing

EXPERIENCE

Software Engineer I — February 2025 – Present
Mastercard — St. Louis, MO
- Engineer a critical anti-fraud **API** with **Spring Boot** to automatically block malicious card testing transactions
- Eliminate all critical vulnerabilities by remediating issues found by **SAST** (Checkmarx) and **SCA** (Black Duck) scans
- Optimize the **Jenkins CI/CD** pipeline, reducing build times by **35%** and fully automating deployments
- Pioneered the integration of Vite with the internal UI Kit by resolving a core build incompatibility, immediately unblocking 5+ teams and authoring documentation to provide a modernization path away from CRA.

Teaching Assistant (Data Structures and Algorithms) — August 2023 – December 2024
University of Houston - College of NSM — Houston, TX
- Mentor **450+** students, improving average assignment scores by **15%** through weekly review sessions
- Author supplementary tutorials on complex topics including recursion and dynamic programming

Undergraduate Research Assistant — May 2023 – August 2023
HULA (Houston Ubiquitous Learning Algorithms) Lab — Houston, TX
- Build a data augmentation pipeline (Python, OpenCV) for **3,000+** MRI scans, growing the dataset by **500%**
- Train a **U-Net CNN** for tumor segmentation, achieving a high-accuracy Dice Score of **0.92** on test data
- Reduce model size by **75%** and accelerated inference speed **4x** using post-training quantization techniques

PROJECTS

Momentum | Go, Kafka, PostgreSQL, Docker, Kubernetes, AWS, Git/GitHub — August 2024
- Engineer a high-throughput platform in Go to process real-time stock data using **Kafka** message queuing
- Achieve **sub-100ms latency** for technical indicator calculations (RSI, MACD) on streaming financial data
- Deploy containerized microservices to a Kubernetes cluster on AWS, ensuring high availability at scale

Glow | SwiftUI, Cloud Firestore, Firebase Auth, Firebase Storage, Git/GitHub — November 2024
- Architect a scalable iOS skincare app with SwiftUI and Firebase for real-time sync and offline support
- Implement a secure multi-provider authentication flow with **Firebase Auth**, reducing login errors by **45%**
- Design an efficient image pipeline with **Firebase Storage** and caching, cutting load times by over 65%

Dropawf | React.js, Node.js, Axios, MySQL, Azure, Docker, Git/GitHub — April 2024
- Lead a 5-person team to design, build, and deploy a full-stack courier service app on Microsoft Azure
- Optimize backend performance by refactoring **MySQL** queries which reduced data retrieval times by **25%**
- Engineer a secure role-based access control (RBAC) system for 5 distinct user types using **JWT**

Wordle | Python, Unittest, Pygame, Jenkins, Docker, Subversion — March 2024
- Develop a scalable Wordle clone in **Python** using an **MVC** design pattern to ensure high code quality
- Configure a **Jenkins CI/CD** pipeline to automate testing, containerization with **Docker**, and deployment
- Reduce invalid user submissions by 40% by integrating a word validation **API** with robust error handling

SKILLS

Proficient   Python, JavaScript, TypeScript, Swift, C++, SQL, HTML/CSS, React.js, Node.js, TailwindCSS, Cypress
Familiar   Go, Java, Spring Boot, TensorFlow, PyTorch, Flask, Kotlin, Rust, Erlang, OCaml, Ruby, Scala, jQuery, GraphQL
Tools   Git/GitHub, Jenkins, Firebase, Postman, JWT, OAuth, Azure, AWS, Docker, Kubernetes, Figma, Dynatrace, Splunk

LEADERSHIP & ACTIVITIES

UX Designer & Frontend Contributor — May 2023 – May 2024
University of Houston - Computer Science Girls — Houston, TX
- Lead UI redesign in Figma for CS department portal, boosting design consistency by 80% with a component library
- Implement the redesigned UI with a team of 4 developers using React.js, ensuring an accessible experience

Webmaster — November 2022 – April 2023
Filipino Student Association — University of Houston
- Launch a full-stack member portal using React and Node.js for an organization of over 1,000 students
- Integrate an events calendar with RSVP functionality, increasing member event attendance by over 25%