Shelden Rattray

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EDUCATION

Georgia State University (Honors College) *Computer Science, B.S.*   *Expected May 2027*
Awards & Activities: 1st Place at Hack the Box CTF Hackathon, 4x President's List Recipient   **GPA: 4.00/4.00**
Relevant Coursework: Data Structures, Design & Analysis of Algorithms, Discrete Mathematics, System-level Programming, Calculus II, Linear Algebra, Applied Probability

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C, C#, TypeScript, Dart, SQL
Tools/Databases: React.js, Node.js, Docker, SQL, MySQL, PostgreSQL, Redis, TensorFlow, PyTorch, PowerBI, Electron, Flutter, Firebase, Unity Engine

EXPERIENCE

Software Engineering Intern | CuesHub   Jul 2025 – Aug 2025
- Engineered a real-time Flutter dashboard visualizing wearable data (heart rate, accelerometer) with smooth sub-second updates across multiple widgets.
- Implemented in-app logging utilities and structured exception handling to improve issue traceability and runtime stability.
- Optimized state management and caching mechanisms, reducing UI stutter and improving frame rendering consistency.
- Collaborated in an 8-member agile team using Git, pull requests, and code reviews to deploy scalable features and maintain clean CI/CD pipelines.

Coding Instructor | Code Ninjas   Sep 2022 – Apr 2023
- Taught 30+ students programming fundamentals in JavaScript, Python, and Scratch by building small interactive games and logic challenges.
- Created lesson modules emphasizing debugging and algorithmic thinking, helping students transition from block-based to text-based coding.
- Mentored new instructors on project-based learning methods to maintain student engagement and comprehension.

PROJECTS

Polysia | Full-Stack Web-Application | *React, Firebase, PostgreSQL, DeepSeek AI* – Website – GitHub
- Developed an adaptive Mandarin learning platform with a custom Adaptive Learner Model (ALM) that personalizes vocabulary, grammar, reading, and chat lessons.
- Implemented six learning modes—including Recall, Reading, Grammar Lab, and AI Chat—each writing real-time learning data back into the ALM.
- Built backend services using Firebase Functions and PostgreSQL (via Prisma) to track learner proficiency, schedule spaced reviews, and adjust difficulty dynamically.
- Integrated DeepSeek for conversational feedback and Azure Neural TTS for natural Mandarin audio, deployed via React + Vite + Tailwind on Vercel.

JotFlow | Mobile Application | *Flutter, Dart, Hive* – GitHub
- Developed and published a Flutter-based note-taking app with offline-first architecture using Hive for persistent local storage.
- Built custom tagging and search capabilities to organize notes efficiently and streamline data retrieval.
- Designed and implemented the full UI/UX in Figma, ensuring responsive layouts and Material-themed components across Android devices.
- Independently managed the app lifecycle from design to release, gaining end-to-end mobile product engineering experience.

Rhythm Game Performance Calculator | Browser Extension | *JavaScript* – GitHub
- Developed a browser extension (3,000+ installs) calculating rhythm-game performance metrics using client-side computation and REST APIs.
- Refactored asynchronous code and caching logic to improve performance and accuracy for user-generated beatmaps.
- Deployed cross-browser via WebExtension API with automated versioning and CI builds for Chrome and Firefox.

LEADERSHIP & ACHIEVEMENTS

Hackathons: Led a 4-person team to win **1st Place** in the Truist & Deloitte CTF Hackathon, outperforming 40+ teams through advanced problem-solving and exploit analysis.

Membership: Member of ColorStack, NSBE, PROGsu, CodePath & Sponsors for Educational Opportunity (SEO)

Leadership: Marketing Director of STARS Ignite at GSU, achieving a 60% growth in Instagram & LinkedIn viewership.